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Transcendental aesthetic =  
Sense perception, sensibility  
(mathematics)

Transcendental analytic =  
judgment, understanding  
(natural sciences)

Transcendental dialectic  
inference, relation,  
(metaphysics)

### KANT'S CRITICAL PHILOSOPHY



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## AN INTRODUCTION

TO

# KANT'S CRITICAL PHILOSOPHY

BY

GEORGE TAPLEY WHITNEY

ASSISTANT PROFESSOR OF PHILOSOPHY IN PRINCETON UNIVERSITY

AND

PHILIP HOWARD FOGEL

ASSISTANT PROFESSOR OF PHILOSOPHY IN PRINCETON UNIVERSITY

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## PREFACE

THIS little volume has arisen from a need felt in connection with undergraduate instruction on Kant. Too often Kant has been taught as merely a part in a scheme of philosophy, or as having significance only as a stage in that development of thought which the History of Philosophy presents. The consequence of this treatment has been the warping of his views to suit the general scheme. In opposition to this, we have attempted in this statement of the Critique of Pure Reason to bring out the many-sidedness of his system in itself, and for itself, and to show its significance as more than merely a proœdetic for further reflections.

We have been painfully conscious of the divergent and even sometimes conflicting tendencies of Kant's thought, and in the opportunities which it thus offers for different interpretations. We have not ignored these conflicting tendencies in his thought for the sake of a unified interpretation, but since we wanted to present what Kant said, rather than what we think Kant ought to have said in order to be consistent, we have thought it better to present them as we found them.

In the observations that we have made from time to time, we have taken those aspects of the diverging tendencies which seemed to us to have been involved in his fundamental position, and upon which he seemed to insist with emphasis.

The selections from Kant and the observations that have been made, we believe, give a true statement of Kant. We make no pretense of giving a complete interpretation of him. We have tried merely to give a statement of him which would bring out the continuity of the thought, which would emphasize the problems he considered and how they arise,—in short, a statement which ought in some degree to meet the needs of the ordinary student.

In the treatment itself, Kant's own language is very largely taken. The translation used principally is that by Max Mueller, though at times we have made use of the Melklejohn translation, or have made our own translation.

Glossaries of technical terms as used by Kant are frequently unsatisfactory, and so in the index we mention the principal terms and refer to Kant's own definition of them in the text.

PRINCETON, N. J., 1914.

## CONTENTS

	PAGE
HISTORICAL DEVELOPMENT OF KANT'S PROBLEM.....	I
INTRODUCTION.....	18
TRANSCENDENTAL ÆSTHETIC.....	26
Metaphysical Exposition of Space.....	27
Transcendental Exposition of Space.....	29
Metaphysical Exposition of Time.....	31
Transcendental Exposition of Time.....	32
General Observations on Transcendental Æsthetic....	33
Conclusion of the Transcendental Æsthetic.....	37
TRANSCENDENTAL LOGIC.....	43
TRANSCENDENTAL ANALYTIC.....	46
Book I. Analytic of Concepts.....	47
Discovery of the Categories.....	48
Transcendental Deduction of the Categories.....	54
Subjective Deduction.....	56
Of the Synthesis of Apprehension in Intuition....	57
Of the Synthesis of Reproduction in Imagination..	58
Of the Synthesis of Recognition in Concepts....	60
Objection Deduction.....	63
Book II. Analytic of Principles.....	100
Schematism of the Pure Concepts of the Understanding	100
Principles of the Pure Understanding.....	101
Axioms of Intuition.....	103
Anticipations of Perception.....	104
Analogies of Experience.....	106
Postulates of Empirical Thought in General.....	127
Refutation of Idealism.....	131
Transition to the Transcendental Dialectic.....	139
TRANSCENDENTAL DIALECTIC.....	141
The Paralogisms of Pure Reason.....	150

	PAGE
Refutation of Mendelssohn's Proof of the Permanence of the Soul.....	160
Conclusion of the Solution of the Psychological Paralogism.....	170
General Note on the Transition from Rational Psychology to Cosmology.....	172
The Antinomy of Pure Reason.....	177
The Ideal of Pure Reason.....	196
Criticism of the Ontological Proof for the Existence of God.....	201
Criticism of the Cosmological Proof for the Existence of God.....	205
Criticism of the Physico-Theological Proof for the Existence of God.....	208
The Regulative Use of the Ideas.....	212

# KANT'S CRITICAL PHILOSOPHY



## HISTORICAL DEVELOPMENT OF KANT'S PROBLEM

Modern philosophy may be divided into two great periods: before, and after Kant.

In the Pre-Kantian period there are two opposed lines of development, English empiricism and Continental rationalism. Continental rationalism is based on the principle that all true knowledge is derived from reason and not from experience. More precisely stated, the Continental school maintained that there are in the mind, prior to all experience, innate ideas and principles as self-evident as the axioms of mathematics. From these ideas and principles, they held, it is possible to deduce a secure metaphysic just as Euclid deduced his system of geometry.

To understand the reason for this position, one must remember that mathematics was the dominant science of the time, and that Descartes and Leibniz were mathematicians of note who had made important contributions to the science. Under such conditions it was natural for them to look upon the mathematical method as the only method of attaining true knowledge. True knowledge is universal and necessary; and mathematics furnishes such knowledge. The mathematician does not have to prove in the case of each particular triangle that the three angles are equal to two right angles. He proves

its truth from the very nature of the triangle and hence his proof has universal validity. Therefore the rationalist concludes that experience is not the basis of the proofs by means of which we arrive at necessary conclusions; and yet necessary conclusions alone deserve the name of knowledge. The rationalist does not deny that we get valuable information from experience; but he denies that such information is knowledge in the strict sense of the term. It lacks universality and necessity and, in so far, lacks the characteristics of true knowledge.

Rationalism, therefore, implies the application of the mathematical method to philosophy. The scholastic doctrine of essence seems to make this method feasible. The scholastic doctrine of essence holds that in addition to the qualities of a thing, there exists a substance or essence from which the qualities necessarily arise. The existence of a certain essence involves the existence of certain qualities. Therefore a knowledge of the essences of things would make it possible to deduce their properties with strict universality and necessity without any reference to experience. This knowledge the rationalists seek to validate by a general doctrine of innate ideas. On the basis of this doctrine and in this way all true knowledge may be derived.

The truth or falsity of the rationalistic doctrine is a question of fact. Locke insists that we have no knowledge of the essences of real things. We know the essences in the case of mathematics because we are dealing with objects of our own creation. When we are concerned with real objects, we are entirely dependent upon experience. Obviously we have no innate ideas, for

were such ideas in the mind from birth, it would be possible for us to deduce everything with certainty and ease without any reference to experience. Knowledge, as a matter of fact, is gained slowly and laboriously by means of experience; whereas it would be apparent almost at once were such ideas a part of our mental equipment. The slow growth, the imperfections, and the limited extent of our knowledge show the falsity of the doctrine of innate ideas.

In the light of his criticism of innate ideas, Locke, in the first book of the *Essay*, says that knowledge arises when the faculties of mind act on the materials furnished by sense. Unfortunately Locke later interprets this to mean that all knowledge is furnished by sense experience. Sense experience, as given, now becomes everything and synthetic activity is ignored. The empirical doctrine, therefore, makes its appearance not as the logical result of sound criticism of rationalism but as a reaction against it.

The empirical doctrine, in the form now being considered, looks upon the mind as passive. It has no knowledge until something happens to it. It is empty until experience comes, and after experience has made its contribution, mind can add nothing. At most it can only order the sense-given material. Kant points out the fundamental defect in this view when he proves that without some activity, no experience is possible. We may be unconscious of the basal activities underlying consciousness, but the results prove their presence.

Locke compares the mind to a chamber with windows, the windows are the senses and through them knowledge

comes into the mind. External objects, as it were, impress themselves on mind as a seal impresses wax. Up to this point mind is passive, but after sensations are aroused, it remembers, compares, desires, and wills. In a word, all knowledge depends upon experience either inner or outer.

All ideas originally given by sensation and reflection are simple and unrelated. From these simple ideas complex ideas are formed. In the second book of the *Essay*, Locke applies this doctrine to the various facts of experience to see if it will stand the test. On the whole, he seems to be satisfied with the result. We must now ask if he is as successful as he thinks.

In the phenomenal world as known by us, there are objects which we look upon as causing sensations in us and to which we refer those sensations as qualities. We never think in terms of subjective sensations, but in terms of objects and the laws of objects. The senses might give us information concerning the qualities of objects, but there is no sense by which we can perceive the thing that has the qualities. Locke admits that here is an element that does not come from experience. The idea of substance, he says, is the idea of an unknown something which supports the qualities, in which the qualities inhere, and in which they are united. We can not think of qualities as existing by themselves, we are forced to think of them as relating to and supported by some thing. This is what the idea of substance means according to Locke.

The significance of Locke's admission becomes apparent when we consider the part which things play in our

world. The order of sensations is changed by many accidental circumstances and all would be chaos if we had no objective principles of order. We have an ordered world because we refer sensations to things which are supposed to have objective relations with one another. Without such an objective order no experience would be possible.

Locke assumes the existence of a real material world, and he often takes the position that this world is correctly represented by the primary qualities. It is a world of solid objects, extended in space and capable of motion. At other times he says that the real essences of things are unknown. His reason for asserting the existence of a material world is to be found in the fact that sensations are forced upon us and he assumes that they must be caused by material things.

The preceding argument is based on the assumption that we know causality as an ontological principle. If that principle can not be derived from experience, in his sense of the term, Locke so far as he is an empiricist, has no right to employ it. Now the principle of causality asserts that everything which comes into existence must have a cause. Hume and Kant will show that this principle can not be derived from sense experience.\* Fur-

\* This statement must not be interpreted to assert that Hume and Kant hold identical positions, nor does it assert that sense experience is in no wise involved in causality. The consideration of this text as a whole will tend to indicate that Kant actually derives knowledge of the existence of causality from a thorough analysis of the world of objective experience, even though experience does not show the real nature of causality as an ontological principle.

thermore, even if we were to grant that the principle could be derived from experience, we could still assert that it gives us no information concerning the nature of a cause outside the field of experience. The cause may be God as Berkeley maintains, and even if it is some physical existence, the theory of representative perception gives us no right to say that some of our ideas are like the cause while others are not.

The empirical doctrine does not warrant the assertion of the existence of God. Locke recognizes that this is so, and proceeds to prove God's existence in a rationalistic manner as follows. From eternity there must have been something; else nothing could now exist. Suppose there is no eternal being, then by hypothesis at one time there would have been nothing, but out of nothing comes nothing. Hence nothing could have existed at any time if at one time there had been nothing. Therefore God exists.

From the preceding discussion it will be apparent that Locke's philosophy contains many diverse elements. He assumes the existence of a material world on the one hand and a number of isolated selves on the other. Then he adopts the physiological method to get some connection between these separate elements. Whenever necessary, rational principles are called in to aid experience. Material things act upon the organs of sense and produce atomic sensations. The self, observing and comparing these sensations furnishes all knowledge of relations including those of space and time.

It is possible to explain the presence of contradictory elements in Locke's philosophy as follows. Locke's

ideal of knowledge was rationalistic. Like the rationalists, he takes mathematics as an example of what knowledge should be. But he differs from the rationalists in holding this ideal to be unrealizable except in mathematics and morals. He holds that in mathematics and morals we make our objects, and so have a complete knowledge of them. Hence in respect to them we can deduce the properties with strict necessity. In all other branches of knowledge, on the contrary, we are dealing with objects independent of mind. In the case of real objects, we do not know the essences because our faculties have serious limitations. Therefore, when dealing with matters of fact, it becomes necessary to give up deduction in favor of experience. Experience does not enable us to make universal statements, but it is our only substitute for the more satisfactory rational knowledge. Thus, though Locke is rationalistic in so far as his ideal of knowledge is concerned, he is forced reluctantly to admit that this ideal can be realized only in cases where we make our own objects. As no other course is possible, he takes experience as a last resort.

Before considering Hume, who exerted a profound influence on Kant, we must notice some of Berkeley's conclusions, as they throw considerable light on Hume's general position.

Berkeley reduces matter to simple ideas plus the notion of some cause. This was not very difficult after Locke's discussion of essences. Locke there took the position that all qualities depend upon unknown essences. It was an easy step from this view to Berkeley's position that matter does not exist. Since spirit is the only cause

known by us, Berkeley affirms that all ideas not produced by finite spirits are caused by God. These ideas and their order constitute what we call nature.

The general view held by Berkeley is a result of three main assumptions. If one adopts the standpoint of *representative perception*, ideas coming into mind, by the way of the sense organs, are connected with external reality by a very slender thread. All that we require is *some cause* capable of producing these sensations. On this point of view, as Descartes admits, the material world might be annihilated and make no difference in our knowledge unless our subjective experience were changed. Berkeley discards matter because it is unknown and its causal activity inconceivable. But although he holds material causality to be inconceivable, Berkeley *assumes the principle of causality* as a self-evident truth. It becomes one of his most useful instruments. Spirits cause all ideas. God produces our sensations, the atomic material of our world. *Spirits are assumed* as abstract substances capable of producing and receiving ideas. Finite spirits add external relations to the given atomic and relationless materials of sense. Sensations are neither causes nor effects of other sensations, but they come with a degree of uniformity which we can make use of in our conduct. They are signs or indications of what may be expected to come.\*

The main points of the preceding discussion may be summarized as follows. After denying the existence of matter, Berkeley retains the physiological method and

\* This view is very much like one phase of Hume's doctrine of causality.

with it all the machinery of representative perception. Causality is accepted as a self-evident principle in spite of our inability to understand how physical things could produce any effect. And finally, Berkeley assumes the existence of selves as abstract substances despite the fact that such substantial spirits are open to all the criticisms which he makes against material substances.

Hume is inclined to take a position contradictorily opposed to the subjective idealism of Berkeley. We venture this assertion in face of the fact that his outcome is unsatisfactory, mainly because he falls back upon the untenable principles of his predecessors. The general tone of Hume's doctrine tends toward phenomenism. In accordance with this tendency, he attempts to overcome the false duality of ideas and objects. He would take concrete experience for his point of departure. It is apparent that he has no desire to adopt the theory of representative perception. We see this side of Hume in his early statements concerning impressions and ideas. Here we do not seem to start from the assumption that ideas are subjective states of mind. We start from a concrete experience in which subjective and objective are not arbitrarily sundered and set over against each other. This tendency is to the fore in the more valuable portions of Hume's discussions concerning causality, self, and physical substance. Here he emphasizes the fact that we should study concrete experience and not use false abstractions as principles of explanation. We can not get back of experience, all our knowledge is confined to the sphere of possible experience. This point of view is quite in line with the spirit of Kant's philosophy.

Unfortunately, however, Hume is never able to free himself from the subjective view of knowledge and the physiological method. If our impressions depend upon the sense organs, they are separate subjective elements and imply an external cause. It now becomes necessary to adopt the doctrine of representative perception. Proceeding in accordance with this general view, Hume bases his analysis of experience on the sense organs, and any idea not derived from sensation is pronounced false. Thus, Hume impelled by this point of view, adopts most of the erroneous assumptions of his predecessors.

Armed with the doctrine that experiences are separate, and though associated are not essentially related, Hume proceeds to examine those principles which imply a real connection. In other words, he proceeds to examine the notion that experiences belong to a self, are related to a world of objects, and are necessarily connected with each other.

In this examination Hume has two ends in view. First, he rules out everything not derived from separate experiences. Secondly, he attempts to show how the false ideas, thus ruled out, come into existence.

Hume holds that all false ideas arise from the association of separate experiences. The physiological point of view led him, as we have seen, to assert the atomic nature of experiences. If he had not, however, in contradiction to the atomic view, held that separate experiences are related and thus associated, he could not have explained why things appear to us as they do. Without the principles of association, his philosophy can give no plausible account of human experience.

Kant, as we shall see, seizes upon this truth and emphasizes both the subjective and the objective principles of synthesis.

If the laws of association are supposed to relate arbitrarily the unrelated atoms of experience, they do not enable Hume to account for our space and time experience. In the end he is forced reluctantly to admit that these ideas refer to the *manner* in which objects appear to us. He is driven to this conclusion by the following considerations. Each impression is a separate fact resulting from a particular sense and there is no special sense to give space and time.\* As all our experiences are in time, and all our impressions of outer sense are referred to space, or to things in space, these ideas can not be explained away. Of the idea of substance it is possible to say that it is an idea produced by a false association of ideas. Obviously, however, space and time resist this method of explanation. No grouping of non-spatial and non-temporal units can produce space and time.†

Hume's final position concerning space and time is an inconsistent compromise. It is, in substance, as follows. Nothing but impressions disposed in a certain manner exist. As the ideas of space and time are not ideas

\* Space and time are indivisible wholes and can not come from separate experiences. They are not made up of parts, consequently, if given by separate impressions, each impression would have to give the whole of space or time; but this is impossible.

† The idea of substance may be the idea of something behind the world of perception and gives little trouble, but in space and time, we are dealing with factors *involved in* the world of perception.

of separate impressions, they must be ideas of the manner or order in which impressions are arranged. But the manner in which impressions are arranged is obviously not a separate impression. Hume's view here is inconsistent with his conception of experience as atomic; it, however, is entirely consistent with the phenomenalist tendency in his thought. Kant's solution of these problems is more satisfactory.

When we turn to Hume's penetrating examination of the causal principle, several points should be emphasized. Among the most important of these is his insistence that temporal conjunction is a necessary part of the idea. This in itself would make him deny the possibility of reducing causality to logical explanation—a reduction that had been attempted by the rationalists. After an examination of several arguments concerning the nature of causality which the rationalists had put forward, Hume concludes that they are all fallacious. The principle of causality can not be demonstrated by reason; nor is it intuitively certain. It is impossible to prove its necessity either as a general principle or in particular cases. The knowledge of this relation is not, in any instance, attained by reasonings *a priori*.\* Let an object be presented to a man of ever so strong natural reason and abilities; if that object be entirely new to him, he will not be able, by the most accurate examination of its sensible qualities, to discover any of its causes or effects. Adam, though his rational faculties be supposed, at the very first, entirely perfect, could not

\* Philosophical Works of David Hume. 4 vols. Boston, Little, Brown & Co. Edinburgh, A. & C. Black. 1854, vol. 4, pp. 30-32.

have inferred from the fluidity and transparency of water, that it would suffocate him; or from the light and warmth of fire that it would consume him. Furthermore, every effect is a distinct event from its cause. In vain, therefore, should we pretend to determine any single event, or infer any cause or effect, without the assistance of observation and experience.\* Reason, therefore, is unable to discover any causal connection.

Experience, just as little as reason, enables us to discover any *necessary connection* between events. From experience we never learn anything more than that, as a matter of fact, events follow each other in a certain order. Against the contention that we are at least conscious of an internal power whereby the will is able to produce bodily movements or call up ideas, Hume retorts that these instances of connection are quite as baffling as any others. We do not in the least understand the means whereby the mind exerts an influence on the body, and we are just as little acquainted with any power in the soul which would enable it to produce ideas voluntarily. In this connection Hume asks, Is there not here, either in a spiritual or material substance, or both, some secret mechanism or structure of parts, upon which the effect depends, and which being entirely unknown to us, renders the power or energy of the will equally unknown and incomprehensible? †

As none of our faculties furnish the idea of necessary connection, how are we to explain the fact of its presence? Hume answers that it comes from *custom* or *habit*. In single instances of causality we discover only that one

\* *Loc. cit.*, pp. 32-37.

† *Loc. cit.*, pp. 74-79.

event follows another. Such events seem *conjoined*, but never necessarily connected. If, however, one particular species of events has always been conjoined with another, when one appears we predict the existence of the other. We now assume a connection between them; some power in the one which necessarily produces the other. Thus the idea of necessary connection arises from several instances of conjunction but never from a single case. But as we suppose all instances exactly alike we must conclude that after the repetition of similar instances, the mind is carried by habit, upon the appearance of one event, to expect its usual attendant. We then *feel* a new impression, to wit, a customary connection in the thought or imagination between one object and its usual attendant; and this sentiment is the original of that idea for which we seek. When we say, therefore, that one object is connected with another, we mean only that these objects have acquired a connection in our thought, by means of which they become proofs of each other's existence.

In light of the preceding discussion, Hume now defines cause to be an object followed by another, and where all the objects, similar to the first, are followed by objects similar to the second. Or, in other words, where, if the first object had not been, the second never had existed. The appearance of a cause always conveys the mind, by a customary transition, to the idea of the effect. We may, therefore, give another definition of cause; and call it, an object followed by another, and whose appearance always conveys the thought to that other. Hume points out that both these definitions are drawn from

circumstances foreign to the cause and that we are unable to indicate anything in the cause which gives it a connection with the effect. We have no idea of this connection; nor even any distinct notion what it is we desire to know, when we endeavor at a conception of it. We say, for instance, that the vibration of this string is the cause of this particular sound. But what do we mean by that affirmation? We either mean, that this vibration is followed by this sound, and that all similar vibrations have been followed by similar sounds: or, that this vibration is followed by this sound, and that, upon the appearance of one, the mind anticipates the senses, and forms immediately an idea of the other. We may consider the relation of cause and effect in either of these two lights; but beyond these we have no idea of it.\*

It was Hume's destructive criticism of the causal idea which led Kant to a new and more searching analysis of experience. As an outcome of his investigation, Kant maintains our right to employ causality as an objective principle. It would be a grave error, however, to suppose that Kant either refutes or attempts to refute most of Hume's contentions. Kant agrees with Hume in holding that the principle is not intuitively certain and that it can not be demonstrated by abstract logical reasoning. Furthermore, no analysis of particular events is able to show why they must be connected as they are. Therefore, Hume and Kant are in agreement in the contention that although mind instinctively connects things as causally related, we have no way of knowing the real nature of this connection. The nature of real causal

\* *Loc. cit.*, pp. 84-89.

activity appears to both to be incomprehensible. Hume, however, just because he adopted the physiological point of view, had to deny that causality is a true constitutive principle in the phenomenal world. Because he looks upon knowledge as a subjective process, Hume is unable to take advantage of the deeper implications of his own critical work. Kant, benefiting by Hume's mistake, gave the causal principle full significance and necessity as a constitutive principle within the world of experience. He saw, as against Hume, that the principle is necessarily involved in all our objective experience.

Hume is commonly supposed to have denied the existence of the self; and indeed such denial would be the necessary outcome of an insistence that ideas and impressions are unrelated. But when Hume's argument is interpreted more sympathetically, we find in it an attempt to refute the substance idea of mind. In opposition to the substance view, Hume justly holds that mind or self is to be found only in the unity of experience, and not as a substance back of such experiences. If we look upon Hume from this point of view, it becomes evident that he marks a great advance over his predecessors, and had it not been for his physiological method, he would have reached a position similar to the one finally worked out by Kant.

Hume's criticism of material substances is similar to his criticism of mental substances. It should have led him to deny the existence of any abstract separation between ideas and things. But instead of appreciating the true outcome of his argument, he is again misled by

his physiological method and denies that perceptions have any continuous existence.

On the whole, Hume's conclusions are sceptical. He holds that it is impossible for us to solve the ultimate questions of metaphysics; it is not given us to know essences and ultimate causes. But if Hume's philosophy is called sceptical, one must after all remember that it was the kind of scepticism capable of being developed into the critical philosophy of Kant. Most of Hume's difficulties can be traced back to the position that knowledge is subjective. Furthermore, we must not forget that this position is in direct contradiction with much of his own work. Unfortunately, Hume could not free himself from the dogmatic assumptions of his predecessors. A Kant is necessary to achieve what had been a task too difficult for Hume.

The English and Continental lines of development meet in Kant. He had been trained in the rationalism of Leibniz. But Hume's conclusions started him from his dogmatic slumbers and led him to attempt a reconciliation of empiricism and rationalism. To this reconciliation we now proceed.\*

\* In connection with this introduction, Cf. Leslie Stephen, English Thought in the Eighteenth Century. Vol. I. Andrew Seth, Scottish Philosophy. Norman Smith, Studies in the Cartesian Philosophy.

## INTRODUCTION

THE methods which metaphysic has hitherto employed have repeatedly brought it to a standstill because they have been inadequate to lead it to a real solution of its problems. Hitherto it has been supposed that all our knowledge must conform to the objects. This procedure has been inadequate, for it has always resulted in the impossibility of establishing any necessary certitude in knowledge. The experiment therefore ought to be made, whether we should not succeed better with the problems of metaphysic, by assuming that the objects must conform to our mode of cognition, for this would better agree with the demanded possibility of an *a priori* knowledge of them, which is to settle something about objects, before they are given us. Just as with Copernicus, so here. Copernicus found himself unable to get on in the explanation of the movements of the heavenly bodies, so long as he assumed that all the stars turned round the spectator, and then tried whether he could not succeed better by assuming the spectator to be turning round and the stars to be at rest. In the same way, Kant proposes to change the point of view and make the intelligibility of objects dependent not upon the objects themselves, but upon activities manifesting themselves through the medium of the conscious subject. When Kant speaks of the Copernican revolution which he brings about in thought, he does not intend to rule out experience as a

factor in knowledge. It is against the old dogmatism which asserted that objects are known to us as they are, that Kant's revolution is directed. Just as the Copernican assumption of the movement of the spectator instead of that of the objects perceived, was revolutionary, so Kant's introduction into phenomenal knowledge of the factors which come through the medium of the conscious subject, is a protest against the old doctrine that knowledge represents things as they really are. But the analogy does not end here. While the assumption of the motion of the spectator does not change the appearance of motion of the fixed stars, it changed the explanation of the apparent motion by the assertion that the fixed stars are at rest. Just so, Kant's view is that not the objects in themselves but rather the noumenal conditions of consciousness contribute the general structure of our experience, and hence that this structure does not represent the real nature of things in themselves. Science is no longer in danger of being found illusory because our impressions may not correspond to reality. Science may now be considered to be an exact interpretation of phenomena, which are what we know, and which are all that we can really know. That is, Kant's Copernican revolution consists in the replacing of the dogmatical by the critical method.\*

That all our knowledge begins with experience is certain. If this were not so, how should the faculty of knowledge be roused into activity so that we may compare,

\* Cf. J. E. Creighton, *Philosophical Review*, Vol. xxii, March, 1913, pp. 133-50. Norman Kemp Smith, *Mind*, New Series, Vol. xxii, October, 1913, pp. 549-51.

connect or separate objects, and thus make them intelligible. In respect to time, therefore, no knowledge within us is antecedent to experience, but all knowledge begins with it. But although all our knowledge begins with experience, it does not follow that it all arises from experience. It is quite possible that even our empirical experience is a compound of that which we receive through impressions, and of that which our own faculty of knowledge (incited only by sensuous impressions), supplies from itself.\*

This gives rise to another question, whether there exists a knowledge independent of experience, and even of all impressions of the senses. Such knowledge would be called *a priori* and distinguished from empirical knowledge, which has its sources *a posteriori*, that is, in experience. The term *a priori* is still open to ambiguity, for it might mean the inference from a general rule—such general rule, however, being after all derived from experience. Kant's meaning of *a priori* which he sometimes calls the pure *a priori* is that knowledge which is absolutely independent of all experience.

How do we recognize *a priori* knowledge? Any proposition which is thought together with its *necessity*, is *a priori*. Furthermore, any judgment which is thought with strict *universality*, so that no exception is admitted as possible, is also *a priori*. Experience can give only future probability and never necessity or universality, that is, *a priority*. They are inseparable from each other,

\* This statement should be compared with, and read in the light of Kant's later criticism of the existence of a substantial self apart from experience. *Vide note, p. 30.*

for that which is necessary must be universal. Necessity, therefore, and strict universality are safe criteria of knowledge *a priori*.

That there really exist in our knowledge such necessary, and in the strictest sense universal, and therefore pure judgments *a priori*, is easily shown. A proposition from geometry would be a case in question: for example, the three angles of a triangle are equal to two right angles.

In order to make significant the statement that pure judgments *a priori* exist, and that they are the forms by which necessary knowledge becomes possible, a further consideration becomes necessary. This consideration is, What sort of judgment is it that is both *a priori* and of significance for necessary knowledge?

Kant points out that in all judgments a two-fold relation is possible between subject and predicate. Either the predicate B belongs to the subject A as something contained (though covertly) in the concept A; or, B lies outside the sphere of the concept A, though somehow connected with it. In the former case the judgment is called analytical, and in the latter synthetical. Analytical judgments are therefore those in which the connection of the predicate with the subject is conceived through identity, while others in which that connection is conceived without identity, may be called synthetical. The former might be called illustrating, the latter expanding judgments, because in the former nothing is added by the predicate to the concept of the subject, but the concept is only divided into its constituent concepts which were always conceived as existing in it, though confusedly;

while the latter add to the concept of the subject a predicate not conceived as existing within it, and not to be extracted from it by any process of mere analysis. For instance, all bodies are extended, is an analytical judgment. The concept, body, implies extension and it need only be analyzed for one to become conscious of the elements contained in it, in order to find that predicate. In the judgment, all bodies are heavy, the predicate is not contained in the concept which forms the subject, but is synthetically added to it.

All mathematical judgments are synthetical and are also judgments *a priori*, and not empirical, because they carry along with them necessity, which can never be deduced from experience. Natural science contains synthetic judgments *a priori* as principles. For example, in all changes of the material world, the quantity of matter remains constant; or, in all communication of motion, action and reaction are equal. It is clear not only that both convey necessity, and that, therefore, their origin is *a priori*, but also that they are synthetical propositions. For the concept of matter does not necessarily involve its permanency, but only its presence in the space which it fills. We, therefore, go beyond the concept of matter in order to join something to it *a priori*, which was not before conceived *in it*. The proposition is, therefore, not analytical but synthetical and yet *a priori*, and the same applies to the other propositions of the pure part of natural science. Metaphysic by its very nature is meant to contain synthetical knowledge *a priori*. Its object is to expand our knowledge *a priori*. This has led to the practice in metaphysic of going so

far beyond a given concept that experience itself can not follow us: as, for instance, in the proposition that the world must have a first beginning. Thus, according at least to its intentions, metaphysic consists merely of synthetical propositions *a priori*.

Kant believes that much is gained if we can bring a number of questions under one general problem. This problem would be, How are synthetical judgments *a priori* possible? It would involve three subsidiary questions, Is pure mathematical science possible? Is pure natural science possible? and, Is metaphysical science possible? The foregoing paragraph points out how he held mathematical and natural science not only to be possible but also to be actual since each contains fundamental principles which are universal and necessary, and, therefore, *a priori*. But with metaphysical science the case has been different. Investigations in this field have hitherto led to conclusions which have lacked universality and necessity, for it has been possible, with equal validity to reach directly contradictory conclusions. The reason for this plight of metaphysic has been that the attempt has always been made to determine the nature and constitution of reality through the pure activity of the understanding, independently of experience. It has been supposed that propositions such as that matter neither comes into nor goes out of existence, can be determined by mere thinking. The result was that they have remained nothing but propositions, without a necessary basis of certitude.

These unsatisfactory results of metaphysical speculations will be found to arise out of a misconception of the

real problem. The real problem is, How are synthetic judgments *a priori* possible? which means, By what method, and how far is it possible through pure reason (*a priori*) to attain to a knowledge of objects? For, synthetic judgments, as over against analytical judgments—which have only logical validity—, are judgments which have objective validity. In other words, the real problem is, In what way is it possible that what is considered self-evident on the basis of pure thought is also valid for objective phenomenal reality? That is, can the propositions of pure understanding be found to have objective, as well as merely logical validity?

The solution of the problem as thus stated involves *transcendental philosophy*. Transcendental philosophy deals with *that aspect of knowledge which can not be given by experience but must come from the side of the subject*, and it is this aspect of knowledge also which is taken up in a critique of pure reason.

A critique of pure reason, in order to be systematically complete, must contain, first, a doctrine of the elements, and then, a doctrine of the method of pure reason. In the doctrine of the elements we will find that there are two stems of human knowledge, which perhaps may spring from a common root, unknown to us, namely *sensibility* and *understanding*, objects being given by the former and thought by the latter. If our sensibility should contain *a priori* representations, constituting conditions under which alone objects can be given, it would belong to transcendental philosophy, and the doctrine of this transcendental sense-perception would necessarily form

the first part of the doctrine of elements, because the conditions under which alone objects of human knowledge can be given must precede those under which they are thought. To this we now proceed.

## TRANSCENDENTAL AESTHETIC

Entirely apart from the process by which knowledge reaches its objects, there is one way by which they are reached directly, namely, intuition.\* Without intuition, knowledge of objects can never be reached by the human mind because the given (in sensibility) is a necessary element in that knowledge. That which is given in sensibility and is *a posteriori*, must be arranged and placed in certain forms in order to be intelligible. These forms are *a priori* and different in kind from sensations.

If we deduct from the perception of objects that which belongs to the thinking of the understanding, namely, substance, force, divisibility, etc., and if we deduct likewise that which belongs to sensation, namely, impermeability, hardness, color, etc., there still remains something of that perception—extension and form. These belong to pure intuition, which *a priori*, and even without a real object of the senses or of sensation, exists in the mind as a mere *form* of sensibility.

The science of all the principles of sensibility *a priori* is called *Transcendental Aesthetic*. This is contrasted with that science which treats of the principles of pure thought and which is called *Transcendental Logic*.

\* Intuition as here used, is not to be confused with ethical intuition, for it here means almost what is usually meant by the term perception. Some translators of Kant use the term perception for Kant's word *Anschauung*, which is usually translated intuition.

In the *Transcendental Aesthetic*, Kant first isolates sensibility by separating everything which the understanding adds by means of its concepts, so that nothing remains but empirical intuition. Secondly, he separates from sensibility all that belongs to sensation, so that nothing remains but pure intuition, which is the mere form of the phenomena and which is all that sensibility *a priori* can supply. In the course of this investigation he finds that there are two pure forms of sensuous intuition,—*Space* and *Time*.

What then are space and time? Are they real things? Or, are they determinations or relations between things, but such as would belong to them even if they were not perceived? Or, are they determinations which inhere only in the form of intuition, and consequently, in the constitution of our mind, without which these predicates of space and time can not be attributed to any thing?

In order to answer these questions, Kant proceeds to an exposition of space. By exposition, he means the clear (though not exhaustive) presentation of that which pertains to a concept. An exposition is *metaphysical* when it contains that which presents the concept as given *a priori*.

#### METAPHYSICAL EXPOSITION OF SPACE

1. Space is not an empirical concept which has been derived from external experience. For in order that certain sensations should be referred to something outside myself, that is, to something in a different part of space from that where I am; again, in order that I may

be able to represent them as side by side, that is, not only as different, but as in different places, the representation of space must already be there. Therefore, the representation of space can not be borrowed through experience from relations of external phenomena, but, on the contrary, this external experience becomes possible only by means of the representation of space.

2. Space forms the very foundation of all external intuitions, and so is a necessary representation *a priori*. It is possible to think away objects which are contained in space, but it is impossible to think away the space which contains them. Space must therefore be regarded as a condition of the possibility of phenomena, not as a determination produced by them; it is a representation *a priori* which necessarily lies at the basis of all external phenomena.

3. Space is not a concept derived from a generalization of the relations of things, but is a pure intuition. In the first place, one can represent to himself space only as single and unitary. To speak of many spaces is to speak merely of parts of one and the same unitary space. These parts can not precede the one all-embracing space as its component parts, and of which it may be considered to be the aggregate. It is only through the all-embracing space that the parts can be thought. Hence it follows that an intuition *a priori* which is not empirical must form the foundation of all conceptions of space.

4. Space is represented as an infinite given magnitude. No concept as such can be thought as containing an infinite number of representations. Nevertheless, space is so thought (for all parts of infinite space exist simul-

taneously). Consequently, the original representation of space is an *intuition a priori*, and not a concept.

### TRANSCENDENTAL EXPOSITION OF SPACE

Kant means by a transcendental exposition, the establishment of a concept as a principle through which the possibility of further synthetic cognitions *a priori* may be understood. To achieve this aim two things are necessary: 1, that such cognitions actually proceed from the given concepts, and 2, that they are possible only under the presupposition of a given mode of explanation of such concept.

Geometry determines the properties of space synthetically, and yet *a priori*. What then must be the representation of space that such cognition may arise from it? It must be originally an intuition, for from mere concepts no propositions can be derived which go beyond the concepts themselves, yet this is actually done in geometry. That intuition, however, must be *a priori*, that is, it must exist within us before any perception of the object, for geometrical propositions are apodictic, that is, necessary, and as such can not be empirical but must be *a priori*. How then is it possible for an external intuition to dwell in the mind prior to the objects themselves, and through which the concept of objects can be determined *a priori*. Evidently not otherwise than so far as it has its seat in the subject only, as the formal condition under which the subject is affected by the objects and thereby is receiving an *immediate representation*, that is, *intuition* of them; therefore, as a form of the

external sense in general.\* It is, therefore, by our explanation only that the *possibility* of *geometry* as a synthetical science *a priori* becomes intelligible. As a result of the foregoing, Kant asserts that it is only from the human standpoint that we can speak of space, external objects, etc. By this he means that space conditions have no significance for objects in themselves. Nevertheless, under the conditions of human experience all objects must be space conditioned. Therefore not only can objects be perceived, but through space, apodictic conclusions can also be drawn concerning them. The apodictic character of the conclusions comes from the *a priority* of space, and since this is only the *form* through which the objects are perceived, it follows that apodictic conclusions can be drawn only concerning objects as they appear to us, that is, external phenomena, and never concerning objects in themselves.

\* Here Kant seems to be employing a conception of the conscious self as a substantial entity which precedes and makes possible the concrete experience of a world of objects. That Kant does not consistently adhere to this view of the conscious self, is indicated by the general development of his doctrine, and in particular in his objective deduction of the categories, in his refutation of idealism as well as in his criticism of the rational psychologists. Instead of maintaining that the self is a substantial entity, his dominant position seems to be that since the self is conscious, and since our consciousness is always of objects, then these two phases stand in inner mutual relation to each other. That is, that it is a mistake to attribute temporal priority to either the self or the world in space and time which we call its objects. This consideration, however, must not be thought to carry with it the denial that the noumenal conditions of the self may precede concrete experience.

## METAPHYSICAL EXPOSITION OF TIME

1. Time is not an empirical concept deduced from any experience, for neither co-existence nor succession would enter into our perception, if the representation of time were not given *a priori*. Only when this representation *a priori* is given, can we imagine that certain things happen at the same time (simultaneously) or at different times (successively).

2. Time is a necessary representation on which all intuitions depend. We can think away particular phenomena out of time, but we can not think away time itself (as the general condition of their possibility). Therefore time is given *a priori*.

3. Time is not a general concept, but a pure form of sensuous intuition. Different times are parts only of one and the same time. The proposition that different times can not exist at the same time can not be deduced from any general concept. Such a proposition is synthetical, and can not be deduced from mere concepts. It is contained immediately in the intuition and representation of time.

4. To say that time is infinite means only that every definite quantity of time is possible only by limitations of one time which one time forms the foundation of all times. The original representation of time must therefore be given as unlimited. But when the parts themselves and every quantity of an object can be represented as determined by limitation only, the whole representation can not be given by concepts (for in that case the

partial representations come first), but it must be founded on immediate intuition.

### TRANSCENDENTAL EXPOSITION OF TIME

On time and its *a priori* necessity depends also the possibility of apodictic principles of the relations of time. Among such principles are the concept of change and with it the concept of motion (as change of place). These are possible only through and in the representation of time. If time were not intuitive *a priori*, no concept, whatever it be, could make us understand the possibility of change, that is, a connection of contradictorily opposed predicates. Time in the form of change makes intelligible the possibility of two objects occupying one and the same place. In the same way, it is possible to conceive the same object as having now one, and then the other of two contradictorily opposed qualities. Our concept of time, therefore, exhibits the possibility of as many synthetical cognitions *a priori* as are found in the general doctrine of motion.

As in the case of space, so here, after ending the metaphysical and transcendental expositions of time, Kant draws certain conclusions. The world constituted in time is an empirically real world only, and has no claim to absolute reality. Time is nothing but the form of our internal intuition. Without the peculiar condition of our sensibility time vanishes, because it is not inherent in the objects but only in the subject that perceives them. Time and space therefore are two sources of knowledge from which various *a priori* synthetical cognitions can be

derived. But these sources of knowledge *a priori* (being merely conditions of our sensibility) fix their own limits in that they can refer to objects only in so far as they are considered as *phenomena*, but can not represent things as they are in themselves. Phenomena are the only field in which they are valid; beyond this field they admit of no objective application.

### GENERAL OBSERVATIONS ON TRANSCENDENTAL ÆSTHETIC

The foregoing considerations now enable Kant to point out what he believes to be the nature of sensuous knowledge.

All our intuition is nothing but the representation of phenomena. Things, as phenomena, can not exist by themselves, but only in relation to us. It remains completely unknown to us what objects may be in themselves apart from the receptivity of our senses. We know nothing but our manner of perceiving objects; this is what alone concerns us. Even if we could impart the highest degree of clearness to our intuition, we should not come one step nearer to the nature of objects in themselves. We should know our mode of intuition, that is, our sensibility, more completely, but always under the indefeasible conditions of space and time. What the objects are in themselves would never become known to us, even through the clearest knowledge of that which alone is given us, the phenomenon. If we drop our subjective condition, the object, as represented with its qualities bestowed on it by sensuous intuition,

is nowhere to be found, and can not possibly be found, because its form, as phenomenal appearance, is determined by those very subjective conditions.

It has been customary in dealing with phenomena to distinguish between what is essential in them, and what is due to a particular position and organization of this or that sense. Such a procedure overlooks the transcendental distinction, for it implies the belief that we know things in themselves. An illustration may help to clarify this point. People might call the rainbow a mere phenomenal appearance, but the rain they would call the thing in itself. This would be quite right, physically speaking, and taking rain as something which, in our ordinary experience and under all possible relations to our senses, can be determined thus and thus only in our intuition. But if we take the empirical in general, and ask, without caring whether it is the same with every particular observer, whether it represents a thing in itself (not the drops of rain, for these are already, as phenomena, empirical objects), then the question as to the relation between the representation and the object becomes transcendental, and not only the drops as mere phenomena, but even their round shape, nay even the space in which they fall, are nothing in themselves, but only modifications or fundamental dispositions of our sensuous intuition, the thing in itself remaining unknown to us.

The next observation that Kant makes, is that the transcendental æsthetic furnishes not only a possible or probable, but a necessary hypothesis of the function of space and time as determining factors in the constitu-

tion of phenomena. This is done by reiterating with emphasis some of the considerations in the metaphysical and transcendental expositions of space and time which had been brought forward to show not only the *a priori* and so the necessity, but also the synthetic character of the conclusions derived through space and time.

The second edition contains a striking supplementary argument in confirmation of the theory of the phenomenality of all objects of the senses. It is an argument based on the relational nature of all our knowledge which belongs to intuition. This knowledge which belongs to intuition contains nothing but mere relations, namely, of the places in an intuition (extension), change of places (motion), and laws, according to which that change is determined (moving forces). Nothing is told us thereby as to what is present in the place, or what, besides the change of place, is active in the things. A thing in itself, however, can not be known by mere relations, and we may, therefore, fairly conclude that, as the external sense gives us nothing but representations of relations, that sense can contain in its representation only the relation of an object to the subject, and not what is inside the object in itself. The same applies to internal intuition. Not only do the representations of the *external senses* constitute its proper material with which we fill our mind, but time, in which these representations are placed, and which precedes even our consciousness of them in experience, nay, forms the formal condition of the manner in which we place them in the mind, contains itself relations of succession, co-existence, and that which must be co-existent with succession, namely, the permanent.

Now that which, as a representation, can precede every act of thinking something, is the intuition: and, if it contains nothing but relations, then the form of intuition. As this represents nothing except what is being placed in the mind, it can itself be the manner only in which the mind, through its own activity, that is, by this placing of its representation, is affected by itself, in other words, an internal sense with respect to its form. Whatever is represented by a sense is so far always phenomenal, and we should therefore have either to admit no internal sense at all, or the subject, which is its object, could be represented by it as phenomenal only. The consciousness of self is a simple representation of the *ego*. In man, this consciousness requires internal perception of the manifold, which is previously given in the subject, and the manner in which this is given in the mind must be called sensibility. If the faculty of self-consciousness is to seek for, that is, to apprehend what lies in the mind, it must affect the mind, and can thus only produce an intuition of itself. The form of this, which lay antecedently in the mind, determines the manner in which the manifold exists together in the mind, namely, in the representation of time. The intuition of self, therefore, is not, as if it could represent itself immediately and as spontaneously and independently active, but according to the manner in which it is internally affected, consequently as it appears to itself, not as it is.

If our consciousness of external objects and of the self is phenomenal, that does not in any way mean that it is illusory.

## CONCLUSION OF THE TRANSCENDENTAL AESTHETIC

We have now completely before us one part of the solution of the general problem of transcendental philosophy, namely, the question, How are synthetical propositions *a priori* possible? That is to say, we have shown that we are in possession of pure *a priori* intuitions, namely, space and time, in which we find, when in a judgment *a priori* we pass out beyond the given conception, something which is not discoverable in that conception, but is certainly found *a priori* in the intuition which corresponds to the conception, and can be united synthetically with it. But the judgments which these pure intuitions enable us to make, never reach farther than to objects of the senses, and are valid only for objects of possible experience.\*

What is the general significance of the Aesthetic? How is its doctrine to be understood? When Kant seems to say that mind receives, and in conformity to its own forms and capacities, orders the material which objects impress upon it, mind seems to be viewed as an independent and pre-existing entity which is in external relation to these objects. If this is Kant's meaning, then the question arises how the pre-existence and external relation of mind and objects can be reconciled with the inseparability of consciousness and its object asserted later, and if there be such contradiction, why it

\* It may not be out of place here to suggest that results reached in the Analytic have a vital bearing on a complete statement of Kant's doctrine of space and time.

was allowed to remain. Is there any way of understanding how such contradiction or apparent contradiction arose? Kant passed through various stages in his philosophical development, and it may be possible to view the Critique of Pure Reason as a synthesis of these stages in which the various parts have been brought over, but the external form of which has not been modified sufficiently to bring out explicitly the underlying principle through which the synthesis of these parts has been made. If this be considered in view of the fact that space and time manifest themselves through the medium of mind and require consciousness, and in view of the notion of mind then prevalent, we may find the reason for this difficulty. It was customary to look upon mind as a substance having thoughts, that is, as the underlying condition of conscious states. Mind, therefore, was not identical with conscious experiences, but was more fundamental since it was their condition. But now since Kant saw that the given material of sense could not furnish space, time, and the other relations required by the existence of an experience such as ours, he might say that they could arise from the mind considered in the substantial sense, that is, that the mind precedes and renders experience possible. Had Kant identified mind and consciousness, we should have had this conclusion in direct contradiction with his well-established conclusion that consciousness and its object are correlative. But when mind is considered as the condition of consciousness, there is no contradiction and the argument of the *Æsthetic* remains valid, even after he repudiates the substance view of mind, because all the time the

argument concerned the fundamental conditions underlying consciousness.\*

It can not be denied that some aspects of Kant's doctrine seem to point to solutions of the difficulty essentially different from the one which has been outlined above. Those who class Kant as a subjectivist are not without reasons for their view. They point to the fact that Kant seemed to believe in an external interaction between mind and real objects. Objects act upon the human organism, and when his organism is affected, the conscious subject refers the resulting sensations to external objects as their producing causes. The general form and the universal laws of the phenomenal world resulting from such interpretation, are, from this point of view, supposed to depend upon the essential nature of an independent mind. If it were possible to reconcile

\* Kant held that human experience is from the first a space and time experience, that is, he held that space and time are presupposed by such experience. But space and time can not be given by the atomic sense material, therefore they must be given by conditions basic to consciousness. At first, if he held a substance view of mind, Kant could identify these basic conditions with mind; but later he doubts whether their identification can be theoretically justified. It should be noted, however, that such a change of view concerning mind would in no wise affect the validity of his argument. In the *Aesthetic* as in all parts of the *Critique* Kant held that space and time must come from unconscious conditions which result in conscious experience. Whether these conditions be identified with the mind considered as a substantial entity, or whether they be considered as conditions basic to the mind, though not included in it, makes not the slightest difference to this argument; though it may have important consequences in other connections. Cf. note, p. 30.

this view with other portions of Kant's doctrine, the significance of mind in the *Æsthetic* would be clear; but the great bulk of evidence is against this position. It is true that Kant seems to hold that the phenomenal object and the human organism act upon each other, and it is also true that his general form of statement is influenced by this view. But much of the Critique indicates that Kant looked upon this interaction as falling within a wider sphere conditioned on both sides by a reality more ultimate than either human subject or phenomenal object. This leads us to consider another interpretation which says that Kant started from a dualism, out of which he is forced by the logic of his own thought. At this point he looks upon all reality as existing in the subject-object form, consequently, things in themselves and selves in themselves are seen to be fictions. Consciousness by its very nature goes beyond itself to include objects. Consciousness can not manifest itself except in the subject-object form. All essential separation between consciousness and reality vanishes. Reality is the manifestation or objectivity of reason. In so far as human knowledge is not adequate to account for this result, it is supposed to be due to an absolute consciousness functioning in the finite subject and its correlative, the world. It must be admitted that this interpretation of Kant is based on a very important and carefully elaborated part of his work. It may even be that this is the logical outcome of Kant's position. But it does not seem to be the position which he holds.\*

\* Cf. pp. 175, 176.

We may now point out briefly some implications of the position which Kant takes in the *Aesthetic*.

The extreme empirical position has been refuted. Human beings do not first have mere isolated sense impressions which somehow group themselves and produce the appearance of an external world related to a self. From such atomic elements alone no perceived world and no knowledge would arise. It is necessary to assume the principles of connection as being present in experience from the beginning.

As the space and time aspect of experience is in some way dependent upon the basic conditions of consciousness, the universality and necessity of mathematics can be explained. Being conditioned as we are, all our objects must be in space and all our internal experiences in time. Space and time are constant factors which furnish the foundation for *a priori* knowledge. But Kant thinks that this argument makes it necessary to deny that things in themselves exist in space and time. Though space and time are the forms of all our perceptions, they themselves depend upon more ultimate conditions, and of course, they can not condition the conditions out of which they arise.

If Kant held that the perceived world depends upon something more ultimate than individual forms and activities, many of the objections to his system lose their point. The perceived world, though implying consciousness, would then have a relatively independent existence of its own. In this world natural man could arise and pass away. And although the whole phenomenal world is a correlative of consciousness, the natural organism

which arises in time might be an indispensable condition connected with consciousness. In this world, knowledge, culture and civilization might arise and pass away. In other words, this point of view would give to objective existence all the reality that could possibly be desired. It is not necessarily inconsistent with this general point of view to hold that although human beings arise in connection with the space and time order of things, they, as conscious and moral beings, manifest a capacity and a worth which transcend the natural order of things. The conscious and moral self is a unique factor in experience. True, the human self springs out of conditions of which he is not directly conscious, and passes at the end of natural life into conditions which his keenest insight can not fathom. But in the phenomenal world his consciousness is the correlative of objects in general. As a moral agent he feels impelled and able to introduce a new order, to change and shape the course of events. For him the phenomenal world though relatively real is not the last word.

## TRANSCENDENTAL LOGIC

Our knowledge arises from two fundamental sources of the mind, the first of which is the reception of representations (the receptivity of impressions), the second the power of knowing an object through these representations (spontaneity of concepts); through the first an object is given to us, through the second, this object is *thought* in relation to that representation (as mere determination of mind). Intuition and concepts, therefore, constitute the elements of all our knowledge, so that neither concepts which are without any corresponding intuition, nor intuition without concepts can result in knowledge. Both are either pure or empirical. They are empirical when they contain sensation (which presupposes the actual presence of the object); pure when no sensation is mixed with the representation. One may call the latter the material of sensuous knowledge. Consequently pure intuition contains the form alone under which something is intuited, and pure conception contains only the form of thinking an object in general. Only pure intuitions and pure conceptions are possible *a priori*; the empirical only *a posteriori*.

We would call the *receptivity* of our mind, that is, its power of receiving representations, whenever it is in any wise affected, *sensibility*, while the *understanding*, on the contrary, is the power of producing representations, or the *spontaneity* of knowledge. Our nature is so

constituted, that *intuition* can never be other than sensuous, that is, it contains only the way in which we are affected by objects. On the contrary, the *understanding* is the power of thinking the object of sensuous intuition. Neither of these powers is to be preferred over the other. Without sensibility no object would be given to us, and without understanding no object could be thought by us. *Thoughts without content are empty, and intuitions without concepts are blind.* Consequently it is just as necessary to make one's concepts sensuous (that is, to add to them the object in intuition) as to make one's intuitions intelligible (that is, to bring them under concepts). Neither of these powers or capacities can exchange its proper function. The understanding can not intuit anything, and the senses can not think anything. Only through their union can knowledge arise. Consequently one must not confuse the part which each plays, but must carefully separate and distinguish each from the other. Consequently we distinguish the science of the rules of the sensibility in general, that is, the *Aesthetic*, from the science of the rules of the understanding in general, that is, *Logic*. The discipline which expounds the forms of thought is called logic. Kant distinguishes between universal logic and particular logic. The former deals strictly with the forms of thought, the latter with the application of those forms to particular instances. But universal logic does not cover the problem as it presents itself to Kant, for, since thought without intuitions is empty, we must seek forms of thought which are pure and at the same time are objective in their application. This is the mission of transcendental logic. Not every

kind of knowledge *a priori* can be called transcendental, but only that by which we know that and how certain representations (intuitive or conceptual) can be used or are possible *a priori* only. Transcendental logic, then, seeks those forms of thinking, which are not merely *a priori* forms, but at the same time refer *a priori to objects of experience*. In other words, transcendental logic must determine the origin, the extent and objective validity of those kinds of knowledge which deal with the laws of understanding and reason.

Transcendental logic, like general logic, has two divisions: analytic and dialectic. That part of transcendental logic which teaches the elements of the pure knowledge of the understanding, and the principles without which no object can be thought, is transcendental analytic, and at the same time a logic of truth. No knowledge can contradict it without losing at the same time all content, that is, all relation to any object, and therefore all truth.

In general logic, in the dialectic, the understanding runs the risk of making, through mere sophisms, a material use of the purely formal principles of the pure understanding, and thus of judging indiscriminately of objects which are not given to us, nay, perhaps can never be given. In transcendental logic, the transcendental dialectic must therefore form a critique of that dialectical semblance.

## TRANSCENDENTAL LOGIC

### PART I

#### TRANSCENDENTAL ANALYTIC

Transcendental analytic consists in the dissection of all our knowledge *a priori* into the elements which constitute the knowledge of the pure understanding. Four points are here essential: first, that the concepts should be pure and not empirical; secondly, that they should not belong to intuition and sensibility, but to thought and understanding; thirdly, that the concepts should be basic and carefully distinguished from derivative or composite concepts; fourthly, that our tables should cover the whole field of the pure understanding. This completeness of a science can not be confidently accepted on the strength of a mere estimate, or by means of repeated experiments only; what is required for it is an idea of the totality of the *a priori* knowledge of the understanding, and a classification of the concepts based upon it; in fact, a systematic treatment. This involves two parts: the analytic of the *concepts* of the pure understanding and the analytic of the *principles* of the pure understanding.

## TRANSCENDENTAL ANALYTIC

### BOOK I. ANALYTIC OF CONCEPTS

By analytic of concepts Kant means the dissection of the faculty of the understanding itself, with the sole object of discovering the possibility of the concepts *a priori*, by looking for them nowhere but in the understanding itself as their birthplace, and analyzing the pure use of the understanding, freed from all inherent empirical conditions.

As in the æsthetic, all intuitions, being sensuous, depend on affections, so in the analytic, the understanding in using concepts depends on functions. By function, Kant here means the unity of the act of arranging different representations under one common representation. The only use which the understanding can make of these concepts is to form judgments by them. All judgments are functions of unity among our representations, the knowledge of an object being brought about, not by an immediate representation, but by a higher one, comprehending this and several others, so that many possible cognitions are collected into one. As all acts of the understanding can be reduced to judgments, the understanding may be defined as *the faculty of judging*. Thus the functions of the understanding can be discovered in their completeness, if it is possible to represent the functions of unity in *judgments*.

## DISCOVERY OF THE CATEGORIES

If we leave out of consideration the contents of any judgment, and fix our attention on the mere form of the understanding, we find that the function of thought in a judgment can be brought under four heads, each of them having three sub-divisions. These may be stated as follows:

## I.

*Quantity of judgments*

- Universal.
- Particular.
- Singular.

## II.

*Quality*

- Affirmative.
- Negative.
- Infinite.

## III.

*Relation*

- Categorical.
- Hypothetical.
- Disjunctive.

## IV.

*Modality*

- Problematical.
- Assertory.
- Apodictic.

We find that Kant has gone somewhat beyond the conventional classification in so far that he has added the singular judgment under the head of quantity, and the infinite judgment under the head of quality. Formal logic has treated the singular like the universal judgment.

Since these singular judgments have no extent at all, the predicate can not refer to part only of that which is contained in the concept of the subject, and be excluded from the rest. But if we compare the singular and universal judgments, looking only at the quantity of knowledge conveyed by each, it will be seen that the singular judgment stands to the universal judgment as unity to infinity, and is therefore essentially different from it. Likewise with the addition of the infinite judgment to the affirmative and the negative judgments under the head of quality. General logic asks only whether the predicate is affirmed or denied. Transcendental logic, on the contrary, considers a judgment according to the value also or the contents of a logical affirmation by means of a purely negative predicate, and asks how much is gained by that affirmation, with reference to the sum total of knowledge. For example: when we say, the soul is not mortal, we have really affirmed that the soul is non-mortal. This means that we have placed the soul in the unlimited sphere of non-mortal beings. The whole sphere of possible beings can be designated as the mortal and the non-mortal, and so in this judgment the infinite sphere of all that is possible becomes limited only in so far that all that is mortal is excluded from it, and that afterwards the soul is placed in the remaining part of its original extent. But this part, even after its limitation, still remains infinite. These judgments, therefore, though infinite with respect to their logical extent, are, with respect to their contents, limitative only, and so can not be passed over in a transcendental table of all varieties of thought in judgments.

The examples just given help to illustrate another point which is of prime importance in the present statement of Kant's metaphysical deduction of the categories of the understanding. They are concrete instances which show that these forms of judgment given in the table are still from Kant's point of view merely analytic. General logic, he believes, in so far that it is concerned with formal processes of thought, proceeds analytically. But in order to have analysis, there must first have been synthesis. Our thought requires that what is manifold in pure intuition should first be examined, received, and connected, in order to transform it into knowledge. This is what Kant calls synthesis. Knowledge is first produced by the synthesis of what is manifold. That knowledge may at first be crude and confused and in need of analysis, but it is synthesis which really collects the elements of knowledge, and unites them to a certain extent. It is therefore the first thing which we have to consider if we want to form an opinion concerning the first origin of our knowledge.

Synthesis in general is the mere result of what Kant calls a blind but indispensable function of the soul, without which we should have no knowledge whatever, and of which we are seldom even conscious. But to reduce this synthesis to concepts is a function that belongs to the understanding, and by which the understanding supplies us for the first time with knowledge properly so called.

Pure synthesis in its most general meaning gives us the pure concept of the understanding. By this pure synthesis Kant means that which rests on the foundation

of what he calls synthetical unity *a priori*. Thus our counting (as we best perceive when dealing with higher numbers) is a synthesis according to concepts, because resting on a common ground of unity, as for instance, the decade. The unity of the synthesis of the manifold becomes necessary under this concept.

By means of analysis different representations are brought under one concept, a task treated of in general logic as exemplified in the foregoing table of judgments. But how to bring, not the representations, but the pure synthesis of representations, under concepts, that is what transcendental logic means to teach. The first that must be given us *a priori* for the sake of knowledge of all objects, is the manifold in pure intuition. The second is the synthesis of the manifold by means of imagination. But this does not yet produce true knowledge. The concepts which impart unity to this pure synthesis and consist entirely in the representation of this necessary synthetical unity, add the third contribution towards the knowledge of an object, and rest on the understanding.

The same function which imparts unity to various representations in one judgment imparts unity likewise to the mere synthesis of various representations in one intuition, which in a general way may be called the pure concept of the understanding. The same understanding, and by the same operations by which in concepts it achieves through analytical unity the logical form of a judgment, introduces also, through the synthetical unity of the manifold in intuition, a transcendental element into its representations. They are therefore called pure

concepts of the understanding, and they refer *a priori* to objects, which would be quite impossible in general logic.

In this manner, there arise exactly so many pure concepts of the understanding which refer *a priori* to objects of intuition in general, as there were in our table logical functions in all possible judgments, because those functions completely exhaust the understanding, and comprehend every one of its faculties. Borrowing a term of Aristotle, Kant calls these concepts *categories*, his intention being originally the same as that of Aristotle, though widely diverging from it in its practical application.

*Table of Categories*

I.

*Of Quantity*

- Unity.
- Plurality.
- Totality.

II.

*Of Quality*

- Reality.
- Negation.
- Limitation.

III.

*Of Relation*

- Of Inherence and Subsistence  
(*substantia et accidentis*).
- Of Causality and Dependence  
(cause and effect).
- Of Community  
(reciprocity between the active and passive).

## IV.

*Of Modality*

Possibility. Impossibility.  
Existence. Non-existence.  
Necessity. Contingency.

This then is the list of all original pure concepts of synthesis, which the understanding includes in itself, and on account of which only it is a pure understanding.

The importance of the preceding obscure argument renders some explanation necessary. What is sometimes called the metaphysical deduction seems to be based on the assumption that the different processes involved in the experiences of a self are necessarily connected, and hence that they may be expected to throw light upon one another. This seems to be Kant's position despite his belief that reason's demands for unity can not be gratified and in general that theoretical thought is unable to know ultimate reality. Granting then that conscious experience must be a more or less *unified* experience in all its parts, it appears obvious that the instruments by means of which formal thought attains unity, may be looked upon as furnishing a clue for the discovery of the principles of unity operating in the sphere of objective reality. This expectation seems reasonable for two reasons: (1) formal thought and concrete experience belong to the same consciousness; (2) formal thought presupposes and depends upon concrete knowledge for its material. It is now possible to take a further step in the argument.

In formal thought judgment is the principle of unity, and formal logic if completed gives, according to Kant, a complete list of the analytic judgments; and as analysis presupposes a synthesis, the analytic judgments of formal logic are supposed to imply just so many synthetic processes. When we attempt to reduce these processes to conceptions, we arrive at Kant's famous table of categories. The categories represent the basic principles presupposed by all our thought concerning reality. They are implicitly present in the thought and experience of all men and determine the ways in which that experience can be organized. We are led to employ these general conceptions as if by instinct. It is as if the noumenal conditions of our being predetermined certain grooves in the general form of our conscious experience along which our thought is constrained to move. We have found the categories, but their justification can not be established without a transcendental deduction; that is Kant's next task.

#### TRANSCENDENTAL DEDUCTION OF THE CATEGORIES

Jurists, when speaking of rights and claims, distinguish in every law suit the question of *right* from the question of *fact*, and in demanding proof of both, they call the former, which is to show the right, the *deduction*. Some concepts which have been used are legitimate and some are illegitimate. Hume holds that the criterion of the legitimacy of the use of such concepts is their being found in experience. The principles of causality and substance, for example, he believes to be the results of an instinctive activity aroused by experience,

but on account of this very instinctiveness and not direct experiential presence, he calls them illegitimate concepts. Kant also makes these principles the results of an instinctive activity, but unlike Hume, holds them to be legitimate, because these principles are justified by the fact that they are involved in the very possibility of all experience. The elaboration and grounding of this proposition, then, is the problem which he considers in the Transcendental Deduction of the Categories.

*By transcendental deduction Kant means the explanation of the way in which the pure concepts of synthesis can a priori refer to objects.* This is very different from an empirical deduction which simply shows how a concept may be gained either by experience or by reflection upon experience. It is obvious therefore that the empirical deduction, since it is empirical, in no wise proves the legitimacy of the concepts, but only accounts for their empirical origin. There are two possible ways in which synthetical representations and their objects can refer to each other with necessity. Either the object alone makes the representation possible, or the representation alone makes the object possible. The former alternative can give only an empirical relation, and so the representation is never possible *a priori*. In the latter case, though representation by itself (for we do not speak here of its causality by means of the will) can not produce its object so far as its existence is concerned, nevertheless the representation determines the object *a priori*, if through it alone it is possible to know anything as an object.

The question now is whether there are not antecedent

concepts *a priori*, forming conditions under which something can be thought as an object in general; for in that case all empirical knowledge of objects would necessarily conform to such concepts, it being impossible that anything should become an object of experience without them. Such concepts of objects in general therefore must form conditions *a priori* of all knowledge produced by experience, and the objective validity of the categories as being such concepts *a priori*, rests on this very fact that by them alone, so far as the form of thought is concerned, experience becomes possible. If by them only it is possible to think any object of experience, it follows that they refer by necessity and *a priori* to all objects of experience.

#### SUBJECTIVE DEDUCTION

The concepts which comprehend the pure thinking *a priori* involved in every experience are discovered in the categories, and it is a sufficient deduction of them and a justification of their objective validity, if we can succeed in proving that by them alone an object can be thought. But as in such a process of thinking more is at work than the faculty of thinking only, namely, the understanding; and as the understanding, as a faculty of knowledge which is meant to refer to objects, requires quite as much an explanation as to the possibility of such a reference, it is necessary for us to consider the subjective sources which form the foundation *a priori* for the possibility of experience, not according to their empirical, but according to their transcendental character.

If every single representation stood by itself, as if

isolated and separated from the others, nothing like what we call knowledge could ever arise, because knowledge forms a whole of representations connected and compared with each other. Kant maintains, therefore, if one ascribes to the senses a synopsis, because in their intuition they contain something manifold, there corresponds to it always a synthesis, and receptivity can make knowledge possible only when joined with spontaneity. This spontaneity appears as a three-fold synthesis which must take place in every kind of knowledge, namely, first, that of the *apprehension* of representations as modifications of the soul in intuition, secondly, of the *reproduction* of them in the imagination, and, thirdly, that of their  in concepts. This leads us to three subjective sources of knowledge which render possible the understanding, and through it, all experience as an empirical product of the understanding.

### I. *Of the Synthesis of Apprehension in Intuition*

Whatever the origin of our representations may be, whether they be due to the influence of external things or to internal causes, whether they have arisen *a priori* or empirically as phenomena, as modifications of the mind they must always belong to the internal sense, and all our knowledge must therefore finally be subject to the formal condition of that internal sense, namely, time, in which they are all arranged, joined, and brought into certain relations to each other.

Every representation contains something manifold, which could not be represented as such, unless the mind

distinguished the time in the succession of one impression after another; for as contained in one moment, each representation can never be anything but absolute unity. In order to change this manifold into a unity of intuition (as, for instance, in the representation of space), it is necessary first to run through the manifold and then to hold it together. It is this act which Kant calls the synthesis of apprehension, because it refers directly to intuition which no doubt offers something manifold, but which, without a synthesis, can never make it such, as is contained in *one* representation.

This synthesis of apprehension must be carried out *a priori* also, that is, with reference to representations which are not empirical. For without it we should never be able to have the representations either of space or of time *a priori*, because these can not be produced except by synthesis of the manifold which the senses offer in their original receptivity. It follows therefore that we have a pure synthesis of apprehension.

## II. *Of the Synthesis of Reproduction in Imagination*

It is no doubt nothing but an empirical law according to which representations which have often followed or accompanied one another, become associated so closely that, even without the presence of the object, one of these representations will, according to an invariable law, produce a transition of the mind to the other. This law of reproduction, however, presupposes that there is in the variety of these representations a sequence and concomitancy subject to certain rules; for without this

the faculty of empirical imagination would never find anything to do, that it is able to do, and would remain, therefore, buried within our mind as a dead faculty, unknown to ourselves.

There must therefore be something to make this reproduction of phenomena possible by being itself the foundation *a priori* of a necessary synthetical unity of them. This becomes clear if we only remember that all phenomena are not things in themselves but only the play of our representations, all of which are in the end determinations only of the internal sense. If therefore we could prove that even our purest intuitions *a priori* give us no knowledge, unless they contain such a combination of the manifold as to render a constant synthesis of reproduction possible, it would follow that this synthesis of the imagination is, before all experience, founded on principles *a priori*, and that we must admit a pure transcendental synthesis of the imagination which forms even the foundation of the possibility of all experience, such experience being impossible without the reproducibility of phenomena. Now when I draw a line in thought, or if I think the time from one noon to another, or if I only represent to myself a certain number, it is clear that I must first necessarily apprehend one of these manifold representations after another. If I were to lose from my thoughts what precedes, whether the first parts of a line or the antecedent portions of time, or the numerical unities representing one after the other, and if, while I proceed to what follows, I were unable to reproduce what came before, there would never be a complete representation, and none of the before-mentioned

thoughts, not even the first and purest representations of space and time, could ever arise within me.

The synthesis of apprehension is therefore inseparably connected with the synthesis of reproduction, and as the former constitutes the transcendental ground of the possibility of all knowledge in general, it follows that a reproductive synthesis of imagination belongs to the transcendental acts of the soul. We may therefore call this faculty the transcendental faculty of imagination.

### *III. Of the Synthesis of Recognition in Concepts*

Without recognition that what we are thinking now is the same as what we thought a moment before, all reproduction in the series of representations would be vain. Each representation would, in its present state, be a new one, and in no wise belonging to the act by which it was to be produced by degrees, and the manifold in it would never form a whole, because deprived of that unity which consciousness alone can impart to it.

Since we can deal only with the manifold in our representations, and since the object corresponding to them—for it is to be something different from all our representations,—is really nothing to us, it is clear that the unity necessitated by the object, can not be anything but the formal unity of our consciousness in the synthesis of the manifold in our representations. Then and then only do we say that we know an object, if we have produced synthetical unity in the manifold of intuition. Such unity would be impossible, if the intuition could not be produced, according to a rule, by such a function of

synthesis as would make the reproduction of the manifold *a priori* necessary, and would make possible a concept in which that manifold is united. For example, we conceive a triangle as an object, if we are conscious of the combination of three straight lines, according to a rule (a principle of synthesis) which renders such an intuition possible at all times. This *unity of rule* determines the manifold and limits it to conditions which render the unity of apperception possible, and the concept of that unity is really the representation of an object = x, which I think, by means of the predicates of a triangle.

No knowledge is possible without a concept, however obscure or imperfect it may be, and a concept is always, with regard to its form, something that can serve as a rule. The concept body, for example, is a rule, and as such, a principle of synthetical unity in our consciousness of the manifold, that is, the concept body, whenever we perceive something outside us, necessitates the representation of extension, and with it, those of impermeability, etc.

Necessity is always founded on transcendental conditions. There must be therefore a transcendental ground of the unity of our consciousness in the synthesis of the manifold of all our intuitions, and therefore also a transcendental ground of all concepts of objects in general, and therefore again of all objects of experience, without which it would be impossible to add to our intuitions the thought of an object, for the object is no more than that something of which the concept predicates such a necessity of synthesis.

Before continuing the statement of the deduction it becomes necessary to point out, and in what follows to keep in mind, two ways in which Kant may be interpreted, since Kant here seems to be fluctuating between two positions.\* One of the positions is that the ground of this synthesis is the synthetical unity of apperception, and that objectivity is given as a direct result of this unity of self-consciousness, that is, making the synthetic process the direct contribution or indeed synonymous with the synthetical unity of apperception. The difficulty involved in this interpretation is that it would involve an assertion that we have a knowledge of the noumenal conditions of the self, which seems to be inconsistent with the main body of his teaching, for example, the statements concerning the nature of self-consciousness in the Paralogisms, and inconsistent with his doctrine that the thing in itself is unknown, and unknowable theoretically, and with his general conclusions concerning the limits of knowledge.

The other alternative interpretation is much less evident, but at the same time very definitely stated by him when he says from time to time that these synthetical processes are expressed through the blind function of imagination, and only thereafter become represented in clear consciousness. That is, that these synthetical processes are absolutely basal to human consciousness and apprehension, and are processes which must take

\* Cf. Andrew Seth, Scottish Philosophy, pp. 131-49. Norman Kemp Smith, Journal of Philosophy, Psychology and Scientific Methods, Vol. ix, pp. 113-28. T. H. Green, Works, Vol. ii, pp. 8-10

place before we can have objects, and even either consciousness or self-consciousness. This means that Kant is holding that these synthetical processes are dependent upon noumenal conditions and are unknown, but, when he tries to represent these synthetical processes, he is compelled to describe them by means of analogies drawn from the phenomena of self-consciousness. Even though these underlying synthetical processes are conditions of objects, it must not be forgotten that in order to have a known world scientifically organized these processes must be represented by concepts in consciousness, and so in terms of consciousness. These synthetical processes always carry with them the potentiality of consciousness, and only in so far as they do result in consciousness, do they lead to a phenomenal world which is the only world that we know. Thus Kant shows that in order to have such a world of experience as we actually do have, it is necessary to presuppose these synthetical processes as a foundation, and furthermore, in order to reach validity in objective relations it is necessary for consciousness to operate by means of certain definite principles or categories. This carries us over into the objective deduction.

### OBJECTIVE DEDUCTION

The manifold of representations may be given in an intuition which is purely sensuous, that is, nothing but receptivity, and the form of that intuition may lie *a priori* in our faculty of representation, without being anything but the manner in which a subject is affected. But the

connection of anything manifold can never enter into us through the senses, and can not be contained, therefore, already in the pure form of sensuous intuition, for it is a spontaneous act of the power of representation; and as, in order to distinguish this from sensibility, we must call it understanding, we see that all connecting, whether we are conscious of it or not, and whether we connect the manifold of intuition of several concepts together, and again, whether that intuition be sensuous or not sensuous, is an act of the understanding. This act we shall call by the general name of *synthesis*, in order to show that we can not represent to ourselves anything as connected in the object, without having previously connected it ourselves, and that of all representations *connection* is the only one which can not be given through the objects, but must be carried out by the subject itself, because it is an act of its spontaneity. It can be easily perceived that this act must be originally one and the same for every kind of connection, and that its dissolution, that is, the *analysis*, which seems to be its opposite, always presupposes it. For where the understanding has not previously connected, there is nothing for it to disconnect, because, as connected, it could only be given by the understanding to the faculty of representation.

But the concept of connection includes, besides the concept of the manifold and the synthesis of it, the concept of the unity of the manifold also. Connection is representation of the *synthetical* unity of the manifold.

The representation of that unity can not therefore be the result of the connection; on the contrary, the concept

of the connection becomes first possible by the representation of unity being added to the representation of the manifold. And this unity, which precedes *a priori* all concepts of connection, must not be mistaken for the category of unity; for all categories depend on logical functions in judgments, and in these we have already connection, and therefore unity of given concepts. The category, therefore, presupposes connection, and we must consequently look still higher for this unity as qualitative, in that, namely, which itself contains the ground for the unity of different concepts in judgments, that is, the ground for the very possibility of the understanding, even in its logical employment.

It must be *possible* that the *I think* should accompany all my representations: for otherwise something would be represented within me that could not be thought, in other words, the representation would either be impossible or nothing, at least so far as I am concerned. That representation which can be given before all thought, is called *intuition*, and all the manifold of intuition has therefore a necessary relation to the *I think* in the same subject in which that manifold of intuition is found. That representation, however, is an act of *spontaneity*, that is, can not be considered as belonging to sensibility. Kant calls it *pure apperception*, in order to distinguish it from empirical apperception, because it is that self-consciousness which by producing the representation, *I think* (which must accompany all others, and is one and the same in every act of consciousness), can not itself be accompanied by any other. He also calls the unity of it the transcendental unity of self-consciousness,

in order to indicate that it contains the possibility of knowledge *a priori*.

For the manifold representations given in any intuition would not be *my* representations, if they did not all belong to one self-consciousness. What he means is that, as my representations (even though I am not conscious of them as such), they must be in accordance with that condition, under which alone they can stand together in one common self-consciousness, because otherwise they would not all belong to me. From this original connection the following important conclusions can be deduced.

The unbroken identity of apperception of the manifold that is given in intuition contains a synthesis of representations, and is possible only through the consciousness of that synthesis. The empirical consciousness, which accompanies various representations, is itself various and disunited, and without reference to the identity of the subject. Such a relation takes place, not by my simply accompanying every relation with consciousness, but by my *adding* one to the other and being conscious of that act of adding, that is, of that synthesis. Only because I am able to connect the manifold of given representations in *one consciousness*, is it possible for me to represent to myself the *identity* of the *consciousness* in these *representations*, that is, only under the supposition of some synthetical unity of apperception does the analytical unity of apperception become possible.

This analytical unity of consciousness belongs to all general concepts, as such. If, for instance, I think *red* in general, I represent to myself a property, which (as a

characteristic mark) may be found in something, or can be connected with other representations; that is to say, only under a presupposed possible synthetical unity can I represent to myself the analytical. The synthetical unity of apperception is, therefore, the highest point with which all employment of the understanding, and even the whole of logic, and afterwards the whole of transcendental philosophy, must be connected; ay, that faculty is the understanding itself.

The thought that the representations given in intuition belong all of them to me, is therefore the same as that I connect them in one self-consciousness, or am able at least to do so; and though this is not yet the *consciousness* of the *synthesis* of representations, it nevertheless presupposes the possibility of this synthesis. In other words, it is only because I am able to comprehend the manifold of representations in one consciousness, that I call them altogether my representations, for otherwise, I should have as manifold and various a self as I have representations of which I am conscious. The synthetical unity of the manifold of intuitions as given *a priori* is therefore the ground also of the identity of that apperception itself which precedes *a priori* all definite thought.

The *understanding* in its most general sense is the faculty of *cognitions*. These consist in a definite relation of given representations to an object; and an *object* is that in the concept of which the manifold of a given intuition is *connected*. All such connection of representations requires of course the unity of the consciousness in their synthesis: consequently, the unity of conscious-

ness is that which alone constitutes the relation of representations to an object, that is, their objective validity, and consequently their becoming cognitions, so that the very possibility of the understanding depends on it.

The first pure cognition of the understanding, therefore, on which all the rest of its employment is founded, and which at the same time is entirely independent of all conditions of sensuous intuition, is this very principle of the original synthetical unity of apperception. Space, the mere form of external sensuous intuition, is not yet cognition: it only supplies the manifold of intuition *a priori* for a possible cognition. In order to know anything in space, for instance, a line, I must *draw* it, and produce synthetically a certain connection of the manifold that is given, so that the unity of that act is at the same time the unity of the consciousness (in the concept of a line), and (so that) an object (a determinate space) is then only known for the first time. The synthetical unity of consciousness is, therefore, an objective condition of all knowledge; a condition, not necessary for myself only, in order to know an object, but one to which each intuition must be subject, in order to become an *object* for me, because the manifold could not become connected in one consciousness in any other way, and without such a synthesis.

And yet this need not be a principle for every possible understanding, but only for that which gives nothing manifold through its pure apperception in the representation, *I am*. An understanding which through its self-consciousness could give the manifold of intuition, and by whose representation the objects of that representa-

tion should at the same time exist, would not require a special act of the synthesis of the manifold for the unity of its consciousness, while the human understanding, which possesses the power of thought only, but not of intuition, requires such an act. To the human understanding that first principle is so indispensable that it really can not form the least concept of any other possible understanding, whether it be intuitive by itself, or possessed of a sensuous intuition, different from that in space and time.

The transcendental *unity* of apperception connects all the manifold given in an intuition into a concept of an object. It is therefore called *objective*, and must be distinguished from the *subjective unity* of consciousness, which is a form of the *internal sense*, by which the manifold of intuition is empirically given, to be thus connected. Whether I can become *empirically* conscious of the manifold, as either simultaneous or successive, depends on circumstances, or empirical conditions. The empirical unity of consciousness, therefore, through the association of representations, is itself phenomenal and wholly contingent, while the pure form of intuition in time, merely as general intuition containing the manifold that is given, is subject to the original unity of the consciousness, through the necessary relation only of the manifold of intuition to the one, *I think*,—that is, through the pure synthesis of the understanding, which forms the *a priori* ground of the empirical synthesis. That unity alone is, therefore, valid objectively; the empirical unity of apperception, which we do not consider here, and which is only derived from the former, under given conditions

*in concreto*, has subjective validity only. One man connects the representation of a word with one thing, another with another, and the unity of consciousness, with regard to what is empirical, is not necessary nor universally valid with reference to that which is given.

Kant proceeds: If I examine the relation of given cognitions in every judgment, and distinguish it, as belonging to the understanding, from the relation according to the rules of reproductive imagination (which has subjective validity only), I find that a judgment is nothing but the mode of bringing given cognitions into the *objective* unity of apperception. This is what is intended by the copula *is*, which is meant to distinguish the objective unity of given representations from the subjective. It (the copula *is*) indicates their relation to the original apperception, and their necessary *unity*, even though the judgment itself be empirical, and therefore contingent; as, for instance, bodies are heavy. By this I do not mean to say that these representations belong *necessarily* to each other, in the empirical intuition, but that they belong to each other by means of the *necessary unity* of apperception in the synthesis of intuitions, that is, according to the principles of the objective determination of all representations, so far as any cognition is to arise from them, these principles being all derived from the principle of the transcendental unity of apperception. Thus, and thus alone, does the relation become a *judgment*, that is, a relation that is valid objectively, and can thus be kept sufficiently distinct from the relation of the same representations, if it has subjective validity only, for instance, according

to the laws of association. In the latter case, I could only say, that if I carry a body I feel the pressure of its weight, but not, that it, the body, is heavy, which is meant to say that these two representations are connected together in the object, whatever the state of the subject may be, and not only associated or conjoined in the perception, however often it may be repeated.

The manifold which is given us in a sensuous intuition is necessarily subject to the original synthetical unity of apperception, because by it alone the unity of intuition becomes possible. That act of the understanding, further, by which the manifold of given representations (whether intuitions or concepts) is brought under one apperception in general, is the logical function of a judgment. The manifold therefore, so far as it is given in an empirical intuition, is *determined* with regard to one of the logical functions of judgment, by which, indeed, it is brought to consciousness in general. The *categories*, however, are nothing but these functions of judgment, so far as the manifold of a given intuition is determined with respect to them. Therefore the manifold in any given intuition is naturally subject to the categories.

The manifold, contained in an intuition which I call my own, is represented through the synthesis of the understanding, as belonging to the necessary unity of self-consciousness, and this takes place through the category.

This category indicates, therefore, that the empirical consciousness of the manifold, given in any intuition, is subject to a pure self-consciousness *a priori*, in the same manner as the empirical intuition is subject to a

pure sensuous intuition which likewise takes place *a priori*.

In the above proposition a beginning is made of a *deduction* of the pure concepts of the understanding. In this deduction, as the categories arise in the understanding only, *independent of all sensibility*, Kant thinks he ought not to take any account as yet of the manner in which the manifold is given for an empirical intuition, but attend exclusively to the unity which, by means of the category, enters into the intuition through the understanding. In what follows he proposes to show, from the manner in which the empirical intuition is given in sensibility, that its unity is no other than that which is prescribed by the category to the manifold of any given intuition. Thus only, that is, by showing their validity *a priori* with respect to all objects of our senses, the purpose of our deduction will be fully attained.

There is one thing, however, of which, in the above demonstration, Kant says, I could not make abstraction: namely, that the manifold for an intuition must be given antecedently to the synthesis of the understanding, and independently of it;—how, remains uncertain. For if I were to imagine an understanding, itself intuitive (for instance, a divine understanding, which should not represent to itself given objects, but produce them at once by his representation), the categories would have no meaning with respect to such cognition. They are merely rules for an understanding whose whole power consists in thinking, that is, in the act of bringing the synthesis of the manifold, which is given to it in intuition from elsewhere, to the unity of apperception; an understanding

which therefore knows nothing by itself, but connects only and arranges the material for cognition, that is, the intuition which must be given to it by the object. This peculiarity of our understanding of producing unity of apperception *a priori* by means of the categories only, and again by such and so many, can not be further explained, any more than why time and space are the only forms of a possible intuition for us.

We have seen that to think an object is not the same as to know an object. In order to know an object, we must have the concept by which any object is thought (the category), and likewise the intuition by which it is given. If no corresponding intuition could be given to a concept, it would still be a thought, so far as its form is concerned: but it would be without an object, and no knowledge of anything would be possible by it, because, so far as I know, there would be nothing, and there could be nothing, to which my thought could be referred. Now the only possible intuition for us is sensuous; the thought of any object, therefore, by means of a pure concept of the understanding, can with us become knowledge only, if it is referred to objects of the senses. Sensuous intuition is either pure (space and time), or empirical, that is, if it is an intuition of that which is represented in space and time, through sensation as immediately real. By means of pure intuition we can gain knowledge *a priori* of things as phenomena (in mathematics), but only so far as their form is concerned; but whether there are things which must be perceived, according to that form, remains unsettled. Mathematical concepts, by themselves, therefore, are not yet knowledge, except under

the supposition that there are things which admit of being represented by us, according to the form of that pure sensuous intuition only. Consequently, as things in *space* and *time* are only given as perceptions (as representations accompanied by sensations), that is, through empirical representations, the pure concepts of the understanding, even if applied to intuitions *a priori*, as in mathematics, give us knowledge in so far only as these pure intuitions, and therefore through them the concepts of the understanding also, can be applied to empirical intuitions. Consequently the categories, by means of intuition, do not give us any knowledge of things, except under the supposition of their possible application to empirical *intuition*; they serve, in short, for the possibility of empirical *knowledge* only, which is called *experience*. From this it follows that the categories admit of no other employment for the cognition of things, except so far only as these are taken as objects of possible experience.

The foregoing proposition is of the greatest importance, for it determines the limits of the employment of the pure concepts of the understanding with reference to objects, in the same manner as the transcendental *Æsthetic* determined the limits of the employment of the pure form of our sensuous intuition. Space and time are conditions of the possibility of how objects can be given to us, so far only as objects of the senses, therefore of experience, are concerned. Beyond these limits they represent nothing, for they belong only to the senses, and have no reality beyond them. Pure concepts of the understanding are free from this limitation, and extend to objects of intuition in general, whether that intui-

tion be like our own or not, if only it is sensuous and not intellectual. This further extension, however, of concepts beyond our sensuous intuition, is of no avail to us; for they are in that case empty concepts of objects, and the concepts do not even enable us to say, whether such objects be possible or not. They are mere forms of thought, without objective reality: because we have no intuition at hand to which the synthetical unity of apperception, which is contained in the concepts alone, could be applied, so that they might determine an object. Nothing can give them sense and meaning, except our sensuous and empirical intuition.

If, therefore, we assume an object of a non-sensuous intuition as given, we may, no doubt, determine it through all the predicates, which follow from the supposition that *nothing belonging to sensuous intuition belongs to it*, that, therefore, it is not extended, or not in space, that its duration is not time, that no change (succession of determinations in time) is to be met in it, etc. But we can hardly call this knowledge, if we only indicate how the intuition of an object *is not*, without being able to say what is contained in it, for, in that case, I have not represented the possibility of an object, corresponding to my pure concept of the understanding, because I could give no intuition corresponding to it, but could only say that our intuition did not apply to it. But what is the most important is this, that not even a single category could be applied to such a thing; as, for instance, the concept of substance, that is, of something that can exist as a subject only, but never as a mere predicate. For I do not know whether there can be anything corresponding

to such a determination of thought, unless empirical intuition supplies the case for its application.

The pure concepts of the understanding refer, through the mere understanding, to objects of intuition, whether it be our own, or any other, if only sensuous intuition, but they are, for that very reason, mere *forms of thought*, by which no definite object can be known. The synthesis, or connection of the manifold in them, referred only to the unity of apperception, and became thus the ground of the possibility of knowledge *a priori*, so far as it rests on the understanding, and is therefore not only transcendental, but also purely intellectual. Now as there exists in us a certain form of sensuous intuition *a priori*, which rests on the receptivity of the faculty of representation, the understanding, as spontaneity, is able to determine the internal sense through the manifold of given representations, according to the synthetical unity of apperception, and can thus think synthetical unity of the apperception of the manifold of *sensuous intuition a priori*, as the condition to which all objects of our intuition must necessarily be subject. Thus the categories, though pure forms of thought, receive objective reality, that is, application to objects which can be given to us in intuition, but as phenomena only; for it is with reference to them alone that we are capable of intuition *a priori*.

This *synthesis* of the manifold of sensuous intuition, which is possible and necessary *a priori*, may be called *figurative (synthesis speciosa)*, in order to distinguish it from that which is thought in the mere category, with reference to the manifold of an intuition in general, and

is called intellectual synthesis (*synthesis intellectualis*). Both are transcendental, not only because they themselves are carried out *a priori*, but because they establish also the possibility of other knowledge *a priori*.

But this figurative synthesis, if it refers to the original synthetical unity of apperception only, that is, to that transcendental unity which is thought in the categories, must be called the transcendental synthesis of the faculty of imagination, in order thus to distinguish it from the purely intellectual synthesis. *Imagination* is the faculty of representing an object even *without its presence* in intuition. As all our intuition is sensuous, the faculty of imagination belongs, on account of the subjective condition under which alone it can give a corresponding intuition to the concepts of the understanding, to our *sensibility*. As, however, its synthesis is an act of spontaneity, determining, and not, like the senses, determinable only, and therefore able to determine *a priori* the senses, so far as their form is concerned, according to the unity of apperception, the faculty of imagination is, so far, a faculty of determining our sensibility *a priori*, so that the synthesis of the intuitions, according to the *categories*, must be the transcendental *synthesis of the faculty of imagination*. This is an effect, produced by the understanding on our sensibility, and the first application of it (and at the same time the ground of all others) to objects of the intuition which is only possible to us. As figurative, it is distinguished from the intellectual synthesis, which takes place by the understanding only, without the aid of the faculty of imagination. In so far as imagination is spontaneity, Kant calls it, occa-

sionally, *productive* imagination: distinguishing it from the *reproductive*, which in its synthesis is subject to empirical laws only, namely, those of association, and which is of no help for the explanation of the possibility of knowledge *a priori*, belonging, therefore, to psychology, and not to transcendental philosophy.

This is the proper place for trying to account for the paradox, which must have struck everybody in the exposition of the form of the internal sense; namely, how that sense represents to the consciousness even ourselves, not as we are in ourselves, but as we appear to ourselves, because we perceive ourselves only as we are *affected* internally. This seems to be contradictory, because we should thus be in a passive relation to ourselves; and for this reason the founders of the systems of psychology have preferred to represent the *internal* sense as identical with the faculty of *appception*, while we have carefully distinguished the two.

What determines the internal sense is the understanding, and its original power of connecting the manifold of intuition, that is, of bringing it under one apperception, this being the very ground of the possibility of the understanding. As in us men the understanding is not itself an intuitive faculty, and could not, even if intuitions were given in our sensibility, take them into itself, in order to connect, as it were, the manifold of *its own* intuition, the synthesis of the understanding, if considered by itself alone, is nothing but the unity of action, of which it is conscious without sensibility also, but through which the understanding is able to determine that sensibility internally, with respect to the manifold

which may be given to it (the understanding) according to the form of its intuition. The understanding, therefore, exercises its activity, under the name of a *transcendental synthesis of the faculty of imagination*, on the passive subject to which it *belongs* as a faculty, and we are right in saying that the internal sense is affected by that activity. The apperception with its synthetical unity is so far from being identical with the internal sense, that, as the source of all synthesis, it rather applies, under the name of the categories, to the manifold of *intuitions in general*, that is, to objects in general before all sensuous intuition; while the internal sense, on the contrary, contains the mere form of intuition, but without any connection of the manifold in it, and therefore, as yet, no *definite* intuition, which becomes possible only through the consciousness of the determination of the internal sense by the transcendental act of the faculty of imagination (the synthetical influence of the understanding on the internal sense) which I have called the figurative synthesis.

This we can always perceive in ourselves. We can not think a line without drawing it in thought; we can not think a circle without describing it; we can not represent, at all, the three dimensions of space, without placing, from the same point, three lines perpendicularly on each other; nay, we can not even represent time, except by attending, during our *drawing* a straight line (which is meant to be the external figurative representation of time) to the act of the synthesis of the manifold only by which we successively determine the internal sense, and thereby to the succession of that determination in it.

It is really motion, as the act of the subject (not as the determination of an object), therefore the synthesis of the manifold in space (abstraction being made of space, and our attention fixed on the act only by which we determine the *internal sense*, according to its form), which first produces the very concept of succession. The understanding does not, therefore, *find* in the internal sense such a connection of the manifold, but *produces* it by *affecting* the internal sense. It may seem difficult to understand how the thinking *ego* can be different from the *ego* which sees or perceives itself (other modes of intuition being at least conceivable), and yet identical with the latter as the same subject, and how, therefore, I can say: I, as intelligence and *thinking* subject, know myself as an object *thought* so far as being given to myself in intuition also, but like other phenomena, not as I am to the understanding, but only as I appear to myself. In reality, however, this is neither more nor less difficult than how I can be, to myself, an object, and, more especially, an object of intuition and of internal perceptions. But that this must really be so, can clearly be shown—if only we admit space to be merely a pure form of the phenomena of the external senses—by the fact that we can not represent to ourselves time, which is no object of external intuition, in any other way than under the image of a line which we draw, a mode of representation without which we could not realize the unity of its dimension; or again by this other fact that we must always derive the determination of the length of time, or of points of time for all our internal perceptions, from that which is represented to us as changeable

by external things, and have, therefore, to arrange the determinations of the internal sense as phenomena in time, in exactly the same way in which we arrange the determinations of the external senses in space. If, then, with regard to the latter, we admit that by them we know objects so far only as we are affected externally, we must also admit, with regard to the internal sense, that by it we only are, or perceive ourselves, as we are internally affected by ourselves; in other words, that with regard to internal intuition we know our own self as a phenomenon only, and not as it is by itself.

In the transcendental synthesis, however, of the manifold of representations in general, and therefore in the original synthetical unity of apperception, I am conscious of myself, neither as I appear to myself, nor as I am in myself, but only that I am. *This representation* is an act of *thought*, not of *intuition*. Now, in order to *know* ourselves, we require, besides the act of thinking, which brings the manifold of every possible intuition to the unity of apperception, a definite kind of intuition also by which that manifold is given, and thus, though my own existence is not phenomenal (much less a mere illusion), yet the determination of my existence can only take place according to the form of the internal sense, and in that special manner in which the manifold, which I connect, is given in the internal intuition. This shows that I have no *knowledge* of myself as I am, but only as I appear to myself. The consciousness of oneself is therefore very far from being a knowledge of oneself, in spite of all the categories which constitute the thinking of an *object in general*, by means of the connection of the

manifold in an apperception. As for the knowledge of an object different from myself I require, besides the thinking of an object in general (in a category), an intuition also, to determine that general concept, I require for the knowledge of my own self, besides consciousness, or besides my thinking myself, an intuition also of the manifold in me, to determine that thought. I exist, therefore, as such an intelligence, which is simply conscious of its power of connection, but with respect to the manifold that has to be connected, is subject to a limiting condition which is called the internal sense, according to which that connection can only become perceptible in relations of time, which lie entirely outside the concepts of the understanding. Such an intelligence, therefore, can only know itself as it appears to itself in an intuition (which can not be intellectual and given by the understanding itself), and not as it would know itself, if its *intuition* were intellectual.

In the *metaphysical deduction* of the *categories* their *a priori* origin was proved by their complete accordance with the general logical functions of thought, while in their *transcendental* deduction Kant established their possibility as knowledge *a priori* of objects of an intuition in general. Now he has to explain the possibility of our knowing *a priori*, by means of the categories, whatever objects may come before our senses, and this not according to the form of their intuition, but according to the laws of their connection, and of our thus prescribing laws to nature, nay, making nature possible. Unless they were adequate to that purpose, we could not understand how everything that may come before

our senses must be subject to laws which have their origin *a priori* in the understanding alone.

First of all, Kant observes that by the *synthesis of apprehension* he understands the connection of the manifold in an empirical intuition, by which perception, that is, empirical consciousness of it (as phenomenal), becomes possible.

We have forms of the external as well as the internal intuition *a priori*, in our representations of space and time: and to these the synthesis of the apprehension of the manifold in phenomena must always conform, because it can take place according to that form only. Time and space, however, are represented *a priori*, not only as *forms* of sensuous intuition, but as *intuitions* themselves (containing a manifold), and therefore with the determination of the *unity* of that manifold in them.\* Therefore *unity of the synthesis* of the manifold without or within us, and consequently a *connection* to which everything that is to be represented as determined in

\* Kant's note: Space, represented as an object (as required in geometry), contains more than the mere form of intuition, namely, the *comprehension* of the manifold, which is given according to the form of sensibility, into a *perceptible* (intuitable) representation, so that the *form of intuition* gives the manifold only, while the *formal intuition* gives unity of representation. In the *Æsthetic* I had simply ascribed this unity to sensibility, in order to show that it precedes all concepts, though it presupposes a synthesis not belonging to the senses, and by which all concepts of space and time become first possible. For as by that synthesis (the understanding determining the sensibility) space and time are first *given* as intuitions, the unity of that intuition *a priori* belongs to space and time, and not to the concept of the understanding.

space and time must conform, is given *a priori* as the condition of the synthesis of all *apprehension simultaneously with* the intuitions, not *in* them, and that synthetical unity can be no other but that of the connection of the manifold of any *intuition whatsoever* in an original consciousness, according to the categories, only applied to our *sensuous intuition*. Consequently, all synthesis, without which even perception would be impossible, is subject to the categories; and as experience consists of knowledge by means of connected perceptions, the categories are conditions of the possibility of experience, and valid therefore *a priori* also for all objects of experience.

If, for instance, I raise the empirical intuition of a house, through the apprehension of the manifold contained therein, into a perception, the *necessary unity* of space and of external sensuous intuition in general is presupposed, and I draw, as it were, the shape of the house according to that synthetical unity of the manifold in space. But this very synthetical unity, if I make abstraction of the form of space, has its seat in the understanding, and is in fact the category of the *synthesis* of the *homogeneous* in intuition in general: that is, the category of *quantity*, to which that synthesis of apprehension, that is, the perception, must always conform.\*

\* Kant's note: In this manner it is proved that the synthesis of apprehension, which is empirical, must necessarily conform to the synthesis of apperception, which is intellectual, and contained in the category entirely *a priori*. It is one and the same spontaneity, which there, under the name of imagination, and here, under the name of understanding, brings connection into the manifold of intuition.

Or if, to take another example, I perceive the freezing of water, I apprehend two states (that of fluidity and that of solidity), and these as standing to each other in a relation of time. But in the time, which as *internal intuition* I make the foundation of the phenomenon, I represent to myself necessarily synthetical *unity* of the manifold, without which that relation could not be given as *determined* in an intuition (with reference to the succession of time). That synthetical unity, however, as a condition *a priori*, under which I connect the manifold of *any intuition*, turns out to be, if I make abstraction of the permanent form of my intuition, namely, of time, the category of *cause*, through which, if I apply it to my sensibility, I determine *everything that happens, according to its relation in time*. Thus the apprehension in such an event, and that event itself considered as a possible perception, is subject to the concept of the *relation of cause and effect*. The same applies to all other cases.

Categories are concepts which *a priori* prescribe laws to all phenomena, and therefore to nature as the sum total of all phenomena (*natura materialiter spectata*). The question therefore arises, as these laws are not derived from nature, nor conform to it as their model (in which case they would be empirical only), how we can understand that nature should conform to them, that is, how they can determine *a priori* the connection of the manifold in nature, without taking that connection from nature. The solution of that riddle is this.

It is no more surprising that the laws of phenomena in nature must agree with the understanding and its form *a priori*, that is, with its power of *connecting* the mani-

fold in general, than that the phenomena themselves must agree with the form of sensuous intuition *a priori*. For laws exist as little in phenomena themselves, but relatively only, with respect to the subject to which, so far as it has understanding, the phenomena belong, as phenomena exist in themselves, but relatively only, with respect to the same being so far as it has senses. Things in themselves would necessarily possess their conformity to the law, independent also of any understanding by which they are known. But phenomena are only representations of things, unknown as to what they may be in themselves. As mere representations they are subject to no law of connection, except that which is prescribed by the connecting faculty. Now that which connects the manifold of sensuous intuition is the faculty of imagination, which receives from the understanding the unity of its intellectual synthesis, and from sensibility the manifoldness of apprehension. Thus, as all possible perceptions depend on the synthesis of apprehension, and that synthesis itself, that empirical synthesis, depends on the transcendental, and, therefore, on the categories, it follows that all possible perceptions, everything in fact that can come to the empirical consciousness, that is, all phenomena of nature, must, so far as their connection is concerned, be subject to the categories. On these categories, therefore, nature (considered as nature in general) depends, as on the original ground of its necessary conformity to law (as *natura formaliter spectata*). Beyond the laws, on which *nature in general*, as a lawful order of phenomena in space and time depends, the pure faculty of the under-

standing is incapable of prescribing *a priori*, by means of mere categories, laws to phenomena. Special laws, therefore, as they refer to phenomena which are empirically determined, can not be completely derived from the categories, although they are all subject to them. Experience must be superadded in order to know such special laws: while those other *a priori* laws inform us only with regard to experience in general, and what can be known as an object of it.

We can not *think* any object except by means of the categories; we can not *know* any object that has been thought, except by means of intuitions, corresponding to those concepts. Now all our intuitions are sensuous, and this knowledge, so far as its object is given, is empirical. But empirical knowledge is experience, and therefore no *knowledge a priori* is possible to us, except of *objects* of possible *experience* alone.

This knowledge, however, though limited to objects of experience, is not, therefore, entirely derived from experience, for both the pure intuitions and the pure concepts of the understanding are elements of knowledge which exist in us *a priori*. Now there are only two ways in which a necessary harmony of experience with the concepts of its objects can be conceived; either experience makes these concepts possible, or these concepts make experience possible. The former will not hold good with respect to the categories (nor with pure sensuous intuition), for they are concepts *a priori*, and therefore independent of experience. To ascribe to them an empirical origin, would be to admit a kind of *generatio œquivoca*. There remains, therefore, the second alternative only

(a kind of system of the *epigenesis* of pure reason), namely, that the categories, on the part of the understanding, contain the grounds of the possibility of all experience in general. How they render experience possible, and what principles of the possibility of experience they supply in their employment on phenomena, will be shown more fully in the following chapter on the transcendental employment of the faculty of judgment.

Some one might propose to adopt a middle way between the two, namely, that the categories are neither *self-produced* first principles *a priori* of our knowledge, nor derived from experience, but subjective dispositions of thought, implanted in us with our existence, and so arranged by our Creator that their employment should accurately agree with the laws of nature, which determine experience (a kind of *system of preformation* of pure reason). But, in that case, not only would there be no end of such an hypothesis, so that no one could know how far the supposition of predetermined dispositions to future judgments might be carried, but there is this decided objection against that middle course that, by adopting it, the categories would lose that necessity which is essential to them. Thus the concept of cause, which asserts, under a presupposed condition, the necessity of an effect, would become false, if it rested only on some subjective necessity implanted in us of connecting certain empirical representations according to the rule of causal relation. I should not be able to say that the effect is connected with the cause in the object (that is, by necessity), but only, I am so constituted that I can not think these representations as connected in any

other way. This is exactly what the sceptic most desires, for in that case all our knowledge, resting on the supposed objective validity of our judgments, is nothing but mere illusion, nor would there be wanting people to say they know nothing of such subjective necessity (which can only be felt); and at all events we could not quarrel with anybody about what depends only on the manner in which his own subject is organized.

The deduction of the pure concepts of the understanding (and with them of all theoretical knowledge *a priori*) consists in representing them as principles of the possibility of experience, and in representing experience as the *determination* of phenomena in space and time,— and, lastly, in representing that determination as depending on the principle of the *original* synthetical unity of apperception, as the form of the understanding, applied to space and time, as the original forms of sensibility.

In this deduction Kant shows that categories as forms of synthesis must be presupposed in order to explain the consciousness of a world of objects. It is obvious, furthermore, that it is impossible to have self-consciousness without a connected consciousness of objects. No material elements can be present to me as recognized parts of my consciousness unless they are capable of being united with the other parts of my consciousness as elements in the consciousness of an objective world. This means that nothing can be an object for a self without conforming to the conditions of self-consciousness. Anything that we are ever able to know, therefore, must be

known in such a way that self-consciousness, the consciousness of a self in relation to all its objects, shall be possible. Even though perceptions of objects precede such self-consciousness, it still remains true that they must conform to this requirement. From this point of view, we see why it is possible to say that the unity of self must be taken as a pre-condition of all experience. This enables us to say that the manifold of perception must be present to one subject in such a way as to make possible the consciousness of one self in relation to that manifold. Even supposing perceptions to be given prior to, and independent of the consciousness of self with its principles for the determination of objects, it is nevertheless true that there must be a pre-established harmony between perceptions and the principles of consciousness. This implies that sense perceptions conform to certain synthetic principles and that the conscious application of these synthetic principles results in the consciousness of an objective order, the correlative of self-consciousness. Thus the principles or categories involved in such an objective world are justified.\*

How are we to understand the objective deduction in which Kant justifies the categories by asserting that without them nature and conscious experience as we know them would be impossible? Perhaps we can state the matter in this way. Reflective scientific consciousness arises out of unreflective and unscientific consciousness. It gives a validity and necessity which was previously lacking. But it develops out of the other as a natural outgrowth. The conditions were all there though

\* E. Caird, *The Critical Philosophy of Kant*, Vol. I, pp. 347, ff.

consciousness was not fully aware of the fact. There are synthetic principles in phenomena as the necessary ground of their existence as phenomena, and these necessary principles are similar to the categories. In other words, experience, objective and subjective, implies principles of synthesis or of connection in all its parts. External experience means objects related to each other and this conditions and is conditioned by the unity of consciousness. The two poles of experience are organically connected. This is the point of departure from which reflective experience arises and upon which it is based. The grounds of necessity and validity are already present in the starting point, but man is not fully conscious of all this, even though he more or less instinctively turns to objective reality as the criterion or test of the truth of his ideas. His ideas must conform to a reality which has an existence not dependent upon his subjective thought and to which his subjective thought must conform if it is to think the truth. What is our justification for asserting that the categories are the laws of nature, and hence that they are justified? It is this: when the experience of human beings is reduced to its pure framework, when all that is subjective is removed or discounted, human experience in general is found to involve certain fundamental principles or conceptions. These are true for consciousness in general and are involved in all conscious experience, that is, they are in no sense individual contributions. Hence they depend upon the ultimate conditioning factors upon which all human conscious beings depend. Human beings may be quite unaware of the necessity or even of

the presence of these factors, but when they turn upon their experience and attempt to rationalize it they find these principles and find themselves justified in using them. In other words, it seems necessary to assume these principles as the very foundation of all conscious experience, that is, they are the laws of nature. Consciousness and objectivity as correlatives arise together out of these conditions and go forward to the position of full validity and necessity, but in the entire process our results are dependent upon and arise out of the original conditions.

If Kant's objective deduction of the categories be considered by itself, one can easily get a wrong impression of its true significance. It might then be taken as justifying a position radically different from that implied by the greater part of the Critique. Once started on the train of thought involved by this point of view, it is natural that everything opposed to such a view should be looked upon as an inconsistency in Kant either to be explained away or to be ignored. The reason for this difficulty of interpretation is not far to seek. It can be baldly stated in this way: all unity in experience implies unity in thought; without some coherence and connection in consciousness, no experience of any sort; consciousness and objective experience are correlatives which must not be sundered. Complete unity of thought and the thought object is the highest point or ideal of consciousness. It is with this problem that Kant is struggling and his attempts to do full justice to this situation have laid him open to much false criticism and interpretation. It should be noted that there is no neces-

sary inconsistency involved in holding, on the one hand, that both consciousness and nature depend upon non-subjective conditions, and, on the other hand, maintaining that unity in nature and in consciousness are mutually determining conditions. Neither unity without nor unity within can exist without the other; they are organically connected. Kant's constant insistence here upon the truth, that no one of these necessary elements involved in an experience such as ours can be correctly understood in isolation from the others, and his special insistence upon the necessity for unity of consciousness to which all conscious experiences point and lead, may easily be misunderstood. The unity of the self may then be taken to mean that such unity either actually or logically precedes and, in either case, projects itself into nature. In other words, when Kant says that the unity of consciousness is the highest condition of all activity of thought, one may be misled and infer that Kant believed it to be the original producing cause. Now it is legitimate to assume that a degree of unity is implied at every point in the development of consciousness and its corresponding development of objective knowledge, and it is also true that the desire for a greater unity is the constant demand of all conscious activity. But this in no wise militates against the view that the entire situation arises out of more ultimate conditions. It would seem that what Kant means is only this: some unity of consciousness is a fact and a necessary fact implied by all experience. Therefore all our attempts at explanation must keep it in mind as something not to be explained away. To ignore this condition would be

to ignore a factor absolutely essential to the existence of the phenomenal world. To admit this, however, need not necessarily imply that consciousness acting as an ultimate principle actually produces the objective world. It would seem better to take a more conservative view and say with Kant that conscious experience and its necessary correlative, objective existence, depend for all that we can prove to the contrary upon more ultimate conditions. We must not overlook, however, that consciousness is necessarily connected with and involved by that which gives laws to nature.\*

By reason of the difficulty of the thought, and the complexity of the two deductions of the categories, it may be considered advisable to sum up in a general way in what position Kant's thought up to this time has left us.

After Hume it was possible to say that from experience we get so much and no more, consequently all that is contained in the phenomenal world over and above the experience given, must come from elsewhere. This is the position taken by Kant. Profiting by Hume's results, Kant saw, first, that experience produced by real things is necessary, secondly, that experience alone is incapable of accounting for our phenomenal world and the knowledge which we have concerning this world, thirdly, that the noumenal conditions of the self must somehow furnish the otherwise lacking conditions.

Furthermore, it must be remembered that Hume had pointed out some, at least, of the elements of knowledge which experience can not give, and had admitted that we can not help thinking in terms of substance and causality.

\* Cf. H. Vaihinger, *Die Philosophie des Als-Ob*, pp. 284, ff.

As radical empiricist he in the end reduced these ideas to illusions, but as observer of facts he admitted that we can not get rid of them. From his point of view they are necessary illusions dependent upon the structure of the mind. Kant's great work consists in proving that without Hume's so-called necessary illusions no knowledge and no experience are possible.

In the aesthetic Kant begins his solution of this problem by giving a tentative account of two important elements, space and time, which can not come from experience. Here Kant seems to hold that objects can be given without any activity on the part of the subject. The only requirement, apparently, is that objects should conform to certain fixed forms, that is, they must be run into moulds furnished by the subject. The analytic, however, throws further light on this problem by proving the impossibility of having an object without an active connecting of elements. In other words, no object can be given without something corresponding to an act of synthesis which binds the elements together and gives the finished product under the forms of space and time.

This last statement brings us to the deduction of the categories. In the subjective deduction Kant shows how the subjective laws employed by the associationists presuppose transcendental conditions. It is no doubt true that we have representations, but whatever the cause of such representations may be, it is necessary that they should be subject to time, the formal condition of the inner sense. The unity of the representation involves a succession of distinct impressions and the binding of these together into a unity. In short, the subjec-

tive principles assumed by the associationists to account for the bringing about of such unity, really include as presuppositions for their existence more fundamental synthetic processes or transcendental principles of unity. This means that the explanation which the associationists give does not account for the unity at all, but that there must be an underlying noumenal unity acting through these synthetic processes. The empirical subjective unity of consciousness is neither self-explanatory, nor can it be explained by laws of association, for the laws of association presuppose some sort of unity which is functioning within, as well as an orderly—and by the associationists unexplained—uniformity without. This much at least seems to be required by a mere perceptual experience which as yet is not knowledge in the true sense. To repeat, in order to have the subjective empirical unity of consciousness, we must have a synthesis of apprehension in intuition, a synthesis of reproduction in imagination, and a synthesis of recognition in concepts. And to have the fulfilment of these conditions there must be unity of action within and uniformity of nature without.

At a stage like the preceding we have neither true experience nor true knowledge. Such a stage may correspond to animal experience. Further conditions must be postulated to account for an experience such as ours, and this is essentially the business of the objective deduction. Kant's problem here is two-fold, on the one hand he wishes to show the logical laws and presuppositions of our knowledge, on the other hand he seeks to indicate, so far as possible, the basal noumenal conditions underlying both consciousness and phenomenal objects.

The highest formal condition is the unity of consciousness or personal identity by which is meant merely that I must be able to think my various experiences together. Everything which it is ever possible for me to experience must conform to this condition.\* But I have certain definite ways of thinking or judging and these ways are the categories. The justification of these categories depends upon the fact that without them I could have no connected external experience and therefore no connected experience or self. Until these categories are consciously used our knowledge lacks the universality and necessity which seems to be a characteristic of scientific knowledge. Up to this point we are unconscious of the transcendental conditions which are involved. And we, in formulating such knowledge as we have at this level, seem to be dependent upon the empirical laws of association. Hence these synthetical processes furnish the conditions necessary to account for objects and, at the same time, for a self which may become aware of itself. Though according to Kant we can not know either the objects or the self as they are in themselves but only that they are. The fundamental point insisted upon by Kant is that object and consciousness are correlatives. No consciousness without objects and no objects without consciousness. This, however, holds merely within the phenomenal realm.

This brings us to another point, namely, the given of the æsthetic. It has been pointed out that we must assume synthetic processes which are working blindly

\* That is, there must be the potentiality of self-consciousness though the *I think* need not consciously accompany all experience.

in order to account for consciousness and for what is phenomenally inseparably connected with it, objects. This enables us to see a reason why all objects of sense perception have the appearance of being *given*. These sense perceptions result partly from processes not conscious, and when consciousness appears on the scene, the given is already there as the result of prior synthetic processes.

But there is more in the Kantian position than this. It has just been said that phenomenal consciousness is dependent upon those underlying processes. But so also are space and time for they are the product of an activity whereby the manifold of sense is brought together. When we get to a higher level and have conscious synthesis which gives us necessary knowledge, the same mysterious process continues. Objects are still given; consciousness does not consciously produce them. If we would say that they are produced by mind, then we must mean by mind something that includes more than consciousness. We may become conscious of the results, and concepts corresponding to the processes involved may be formed, but of anything more we are rarely conscious.

Certain important conclusions can now be drawn. Noumenal conditions of the self necessitate the use of the forms, space and time and the categories, while the self known by us is determined in its existence by its environment both past and present. It may gradually, and with a vast amount of work, come to a clearer and clearer knowledge of the phenomenal world. Here it uses conceptions which must conform to the formal unity of

consciousness. In its interpretations of nature it may advance far and increasingly organize the phenomena, but go as far as it may, it is no nearer to the ultimate nature of reality.

## TRANSCENDENTAL ANALYTIC

### BOOK II. ANALYTIC OF PRINCIPLES

The analytic of principles is a canon of the faculty of judgment, teaching it how to apply to phenomena the concepts of the understanding, which contain the condition of rules *a priori*. Kant's transcendental doctrine of the faculty of judgment consists of two parts. The first treats of the sensuous condition under which alone pure concepts of the understanding can be used. This is what he calls the *schematism* of the pure understanding. The second part treats of the synthetical judgments, which can be derived *a priori* under these conditions from pure concepts of the understanding, and on which all knowledge *a priori* depends. It treats, therefore, of the principles of the pure understanding.

#### SCHEMATISM OF THE PURE CONCEPTS OF THE UNDERSTANDING

In comprehending any object under a concept, the representation of the former must be homogeneous with the latter. The question here is: how can we apply the categories, which are concepts and are *a priori*, to perceptions which are intuitions and empirical. There is a heterogeneity here which makes the discovery of some underlying homogeneous principle necessary, some intermediate representation which is pure, that is, free from all that is empirical, and yet intellectual on the one side,

and sensuous on the other. Such a representation is the *transcendental schema*. This mediating faculty is the imagination working under the form of time. Time is the form of the mediating function because it is homogeneous with the categories since it has an *a priori* character, and homogeneous with perception for it is contained in every representation of the manifold. It is consequently both pure and sensuous.

To proceed to the categories as schematized. The imagination representing quantity under the form of time gives us a *series of time*, namely, number, that is, an addition of units. The beginning of the number series gives *unity*; progress in the series gives *plurality*; the series taken as a whole gives *totality*. Quality represented under the form of time gives us the *contents of time*, that is, degree in the filling of time. We have, then, *reality* or time filled, *negation* or time empty, and *limitation* or time partially filled. Relation represented under the form of time gives us an *order of time*. There is permanence of the real in time or *substance*, orderly succession in time or *causation*, and reciprocal causality of substances or *reciprocity*. Modality represented under the form of time gives us the comprehension of time. Agreement with the conditions of time in general is the schema of *possibility*, existence at a given time is the schema of *reality*, and the existence of an object at all times is the schema of *necessity*.

#### PRINCIPLES OF THE PURE UNDERSTANDING

The preceding section on the schematism of the pure concepts of the understanding had as its purpose the

statement of the categories in the form which they assume as real categories of the phenomenal world. The problem before us in the Principles is, What are the synthetic *a priori* judgments which the categories place us in a position to make with regard to nature? In the transcendental deduction of space and time, Kant pointed out that from their *a priority* could be deduced other necessary principles, e. g. some mathematical principles. So here, with regard to the categories, Kant now asks, What necessary statements concerning some of the principles of physical science are we enabled to make on the basis of the categories? In the course of the discussion, Kant considers, among others, these fundamental notions: matter, causality, and nature as an interrelated system. His discussion of these, however, is not always clearly evident on account of the artificial machinery gotten from formal logic which he uses as the outline of his treatment.

The table of the categories is the natural clue to the principles in so far as they are merely the rule of objectively applying the categories.

The principles are

### I.

Axioms of Intuition.

### II.

Anticipations of Perception.

### III.

Analogy of Experience.

### IV.

Postulates of Empirical Thought in General.

## I. AXIOMS OF INTUITION. Their principle is: All intuitions are extensive quantities.

All phenomena contain, so far as their form is concerned, an intuition in space and time, which forms the *a priori* foundation of all of them. They can not, therefore, be apprehended, that is, received into empirical consciousness, except through the synthesis of the manifold, by which the representations of a definite space or time are produced, that is, through the synthesis of the homogeneous, and the consciousness of the synthetical unity of the manifold. Now the consciousness of the manifold and homogeneous in intuition, so far as by it the representation of an object is first rendered possible, is the concept of quantity. Therefore even the perception of an object as a phenomenon is possible only through the same synthetical unity of the manifold of the given sensuous intuition, by which the unity of the composition of the manifold and homogeneous is conceived in the concept of a *quantity*; that is, phenomena are always quantities, and *extensive quantities*; because as intuitions in space and time they must be represented through the same synthesis through which space and time in general are determined.

In other words, in the Axioms we have a deduction of applied mathematics. Since all phenomena are in space and time they are extensive in their nature and hence they are measurable, divisible and numerable. From this it follows that geometry and arithmetic apply to phenomena. Hence all that these sciences find true of pure space and time will also be found true of phenomena so far as they are in space and time.

II. ANTICIPATIONS OF PERCEPTION. Their principle is: In all *phenomena* the real, which is the *object of a sensation*, has intensive quantity, that is, a degree.

All knowledge by means of which I may know and determine *a priori* whatever belongs to empirical knowledge, may be called an anticipation. But as there is always in phenomena something which can never be known *a priori*, and constitutes the real difference between empirical and *a priori* knowledge, namely, sensation (as matter of perception), it follows that this can never be anticipated. The pure determinations, on the contrary in space and time, as regards both figure and quantity, may be called anticipations of phenomena, because they represent *a priori* whatever may be given *a posteriori* in experience. If, however, there should be something in every sensation that could be known *a priori* as sensation in general, even if no particular sensation be given, this would, in a very special sense, deserve to be called anticipation, because it seems extraordinary that we should anticipate experience in that which concerns the matter of experience and can be derived from experience only. Yet such is really the case in the anticipation of intensive quantity, that is, degree.

What corresponds in every empirical intuition to sensation is reality, what corresponds to its absence is negation=0. Every sensation, therefore, and every reality in phenomena however small it may be, has a degree, that is, an intensive quantity which can always be diminished, and there is between reality and negation a continuous connection of possible realities, and of possible smaller perceptions. Every color, red, for in-

stance, has a degree, which, however small, is never the smallest; and the same applies to heat, the momentum of gravity, etc.

Kant's dynamical theory of matter is here given a transcendental basis. Science has hitherto been mechanical; it has held to the strict homogeneity of matter, and has explained differences of bodies in terms of different quantities of homogeneous parts contained in the same volume. To this Kant opposes another view: that although the same spaces are perfectly filled by two different kinds of matter, so that there is no point in either of them where matter is not present, yet the real in either, the quality being the same, has its own degree (of resistance or weight) which, without any diminution of its extensive quantity, may grow smaller and smaller in *infinitum*, before it reaches the void and vanishes. Thus a certain expansion which fills space, for instance, heat, and every other kind of phenomenal reality, may, without leaving the smallest part of space empty, diminish by degrees in *infinitum*, and nevertheless fill space with its smaller, quite as much as another phenomenon with greater degrees. Kant says that he does not mean to say that this is really the case with the different kinds of matter according to their specific gravity. He only wants to show by a fundamental principle of the pure understanding, that the nature of our perception renders such an explanation possible, and that it is wrong to look upon the real in phenomena as equal in degree, and different only in aggregation and its extensive quantity, nay, to maintain this on the pretended authority of an *a priori* principle of the understanding.

III. ANALOGIES OF EXPERIENCE. Their principle is: Experience is possible only through the representation of a necessary connection of perceptions.

The Analogies of Experience demand a more detailed treatment than do the preceding Principles of the Pure Understanding. The Analogies consider principles which are not only of the utmost importance as synthetic principles of knowledge, but which also claim to be fundamental ontological principles, and which in this rôle have played an important part in all scientific and philosophical speculation. Moreover we must remember how Hume's treatment of causality set Kant to thinking and finally led to the production of the Critique of Pure Reason. Furthermore, if we consider the difficulty of comprehending the significance of causality, one of the most baffling conceptions in philosophy, we shall understand why the Analogies merit and demand more than passing notice.

The three modes of time are *permanence*, *succession*, and *co-existence*. There will therefore be three rules of all relations of phenomena in time, by which the existence of every phenomenon with regard to the unity of time is determined, and these rules are presupposed in all experience, indeed, render all experience possible.

Experience in reference to nature is empirical knowledge, that is, knowledge which determines an object by means of perceptions. Nature is, therefore, a synthesis of perceptions, a synthesis which itself is not contained in the perception. The synthetical unity of the manifold of the perceptions is contained in a consciousness, that unity constituting the essential of our knowledge of the

objects of the senses, that is, of experience. In subjective experience, perceptions come together contingently only, so that no necessity of their connection could be discovered in the perceptions themselves or in their order, apprehension being only a composition of the manifold of empirical intuition, but containing no representation of the real connection of existence in space and time. Objective experience, on the contrary, and that referred to at the beginning of the paragraph, is a knowledge of objects by perceptions, in which therefore the relation of the existence of the manifold is to be represented, not as it is put together in time, but as it is really in time, objectively. Now, as time itself can not be perceived, the determination of the existence of objects in time can take place only by their connection in time in general, that is, through concepts connecting them *a priori*. As these concepts always imply necessity, we are justified in saying that experience is possible only through a representation of the necessary connection of perceptions.

What has been said of all synthetical principles, and what is said here, is, that these analogies have their meaning and validity, not as principles of the transcendent, but only as principles of the empirical use of the understanding.

A. FIRST ANALOGY. PRINCIPLE OF THE PERMANENCE OF SUBSTANCE: *In all changes of phenomena the substance is permanent, and its quantum is neither increased nor diminished in nature.*

All phenomena take place in time. Phenomena can be determined in time in two ways, either as successive

or as co-existent. In the first case time is considered as a series, in the second as a whole.

Our apprehension of the manifold of phenomena is always successive, and therefore always changing. By it alone therefore we can never determine whether the manifold, as an object of experience, is co-existent or successive, unless there is something in it which exists always, that is, something constant and permanent, while change and succession are nothing but so many kinds of time in which the permanent exists. Relations of time are therefore possible in the permanent only (co-existence and succession being the only relations of time) so that the permanent is the substratum of the empirical representation of time itself, and in it alone all determination of time is possible. Permanence expresses time as the constant correlative of all existence of phenomena, of all change and concomitancy. For change does not affect time itself, but only phenomena in time (nor is co-existence a mode of time itself, because in it no parts can be co-existent, but successive only). Only through the permanent does *existence* in different parts of a series of time assume a *quantity* which we call *duration*. For in mere succession existence always comes and goes, and never assumes the slightest quantity. Without something permanent, therefore, no relation of time is possible. Time by itself, however, can not be perceived, and it is therefore the permanent in phenomena that forms the substratum for all determination of time, and at the same time the condition of the possibility of all synthetical unity of perceptions, that is, of experience; while with regard to that permanent all existence and

all change in time can only be taken as a mode of existence of what is permanent. In all phenomena, therefore, the permanent is the object itself, that is, the substance (phenomenon), while all that changes or can change belongs only to the mode in which substance or substances exist, therefore, to their determinations. This permanence, however, is nothing but the manner in which we represent the existence of things (as phenomenal).

On this permanence also depends the right understanding of the concept of *change*. To arise and to perish are not changes of that which arises or perishes. Change is a mode of existence, which follows another mode of existence of the same object. Hence whatever changes is permanent, and its condition only changes. As this alteration refers only to determinations which may have an end or a beginning, we may use an expression that seems somewhat paradoxical and say: the permanent only (substance) is changed, the changing itself suffers no change, but there is only an alteration, certain determinations ceasing to exist, while others begin.

Substances, therefore (as phenomena), are the true substrata of all determinations of time. Permanence, therefore, is a necessary condition under which alone phenomena, as things or objects, can be determined in a possible experience.\*

Here again we have a clear example of the transcendental method. Kant shows that the proposition: amid all change of phenomena substance is permanent, and the quantity of it is in nature neither increased nor dimin-

\* This same necessity is recognized in physical science in the assertion that the amount of energy remains constant.

ished, can neither come from experience, nor be based on logical certainty, but that it is only on the assumption of this proposition, that experience is possible.

**B. SECOND ANALOGY. PRINCIPLE OF THE SUCCESSION OF TIME, ACCORDING TO THE LAW OF CAUSALITY:** *All changes take place according to the law of connection between cause and effect.*

The apprehension of the manifold of phenomena is always successive. The representations of the parts follow one upon another; whether they also follow one upon the other in the object not being thus determined. Since phenomena are not things in themselves, and are yet the only things that can be given us to know, the question is what kind of connection in time belongs to the manifold of the phenomena itself, when the representation of it in our apprehension is always successive. Thus, for instance, the apprehension of the manifold in the phenomenal appearance of a house is successive. The question then arises, whether the manifold of the house itself be successive, which of course no one would admit. Whenever I ask for the transcendental meaning of my concepts of an object, I find that a house is not a thing in itself, but a phenomenon only, that is, a representation the object-in-itself of which is unknown. What then can be the meaning of the question, how the manifold in the phenomenon itself (which is not a thing in itself) may be connected? Here that which is contained in our successive apprehension is considered as representation, and the given phenomenon, though it is nothing but the whole of these representations, as their

object, with which my concept, drawn from the representations of my apprehension, is to accord. As the accord between knowledge and its object is truth, it is easily seen, that we can ask here only for the formal conditions of empirical truth, and that the phenomenon, in contradistinction to the representations of our apprehension, can only be represented as the object different from them, if it is subject to a rule distinguishing it from every other apprehension, and necessitating a certain kind of conjunction of the manifold. That which in the phenomenon contains the condition of this necessary rule of apprehension is *the object*.

Every apprehension of an event is a perception following on another perception. But as this applies to all synthesis of apprehension, as was shown before, in the phenomenal appearance of a house, that apprehension would not thereby be different from any other. But I observe at the same time, that if in a phenomenon which contains an event I call the antecedent state of perception, A, and the subsequent, B, B can only follow A in my apprehension, while the perception A can never follow B, but can only precede it. I see, for instance, a ship gliding down a stream. My perception of its place below follows my perception of its place higher up in the course of the stream, and it is impossible in the apprehension of this phenomenon that the ship should be perceived first below and then higher up. We see, therefore, that the order in the succession of perceptions in our apprehension is here determined, and our apprehension regulated by that order. In the former example of a house my perceptions could begin in the apprehension at the roof

and end in the basement, or begin below and end above; they could apprehend the manifold of the empirical intuition from right to left or from left to right. There was therefore no determined order in the succession of these perceptions, determining the point where I had to begin in apprehension, in order to connect the manifold empirically; while in the apprehension of an event there is always a rule, which makes the order of the successive perceptions (in the apprehension of this phenomenon) necessary.

We shall have to derive the subjective succession in our apprehension from the objective succession of the phenomena, because otherwise the former would be entirely undetermined, and unable to distinguish one phenomenon from another. The former alone proves nothing as to the connection of the manifold in the object, because it is quite arbitrary. The latter must therefore consist in the order of the manifold in a phenomenon, according to which the apprehension of what is happening follows upon the apprehension of what has happened, in conformity with a rule. Thus only may one say not only of my apprehension, but of the phenomenon itself, that there exists in it a succession, which is the same as to say that one can not arrange the apprehension otherwise than in that very succession.

In conformity with this, there must exist in that which always precedes an event the condition of a rule, by which this event follows at all times, and necessarily; but I can not go back from the event and determine by apprehension that which precedes. For no phenomenon goes back from the succeeding to the preceding point of time,

though it is related to some preceding point of time, while the progress from a given time to a determined following time is necessary. Therefore, as there certainly is something that follows, I must necessarily refer it to something else which precedes, and upon which it follows by rule, that is, by necessity. So that the event, as being conditional, affords a safe indication of some kind of condition, while that condition itself determines the event.

If we supposed that nothing precedes an event upon which such event must follow according to rule, all succession of perception would then exist in apprehension only, that is, subjectively; but it would not thereby be determined objectively, what ought properly to be the antecedent and what the subsequent in perception. We should thus have a mere play of representations unconnected with any object, that is, no phenomenon would, by our perception, be distinguished in time from any other phenomenon, because the succession in apprehension would always be uniform and there would be nothing in the phenomena to determine the succession, so as to render a certain sequence objectively necessary. I could not say therefore that two states follow each other in a phenomenon, but only that one apprehension follows another, which is purely subjective, and does not determine any object, and can not be considered therefore as knowledge of anything (even of something purely phenomenal).

If therefore experience teaches us that something happens, we always presuppose that something precedes on which it follows by rule. Otherwise I could not say of the object that it followed, because its following in my

apprehension only, without being determined by rule in reference to what precedes, would not justify us in admitting an objective following. It is therefore always with reference to a rule by which phenomena as they follow, that is, as they happen, are determined by an antecedent state, that I can give an objective character to my subjective synthesis (of apprehension); nay, it is under this supposition only that an experience of anything that happens becomes possible.

It is impossible that such rule should be derived by a perception and comparison of many events following in the same manner on preceding phenomena, for it would then be only an empirical generalization.

It is necessary, therefore, to show by examples that we never, even in experience, ascribe the sequence or consequence (of an event or something happening that did not exist before) to the object, and distinguish it from the subjective sequence of an apprehension, except when there is a rule which forces us to observe a certain order of perceptions, and no other; nay, that it is this force which from the first renders the representation of a succession in the object possible.

We have representations within us, and can become conscious of them; but the representations are representations only, that is, internal determinations of our mind in this or that relation of time. What right have we then to ascribe to these modifications an objective reality beyond their subjective one? Their objective character can not consist in the mere relation of representations to each other. If we try to find out what new quality or dignity is imparted to our representations

by their relation to an *object*, we find that it consists in nothing but the rendering necessary the connection of representations in a certain way, and subjecting them to a rule; and that on the other hand they receive their objective character only *because a certain order is necessary* in the time relations of our representations.

If then it is a necessary law of our sensibility, and therefore a *formal* condition of all perception, that a preceding necessarily determines a succeeding time (because I can not arrive at the succeeding time except through the preceding), it is also an indispensable *law of the empirical representation* of the series of time that the phenomena of past time determine every existence in succeeding times, nay, that these, as events, can not take place except so far as the former determine their existence in time, that is, determine it by rule. *For it is of course in phenomena only that we can know empirically this continuity in the coherence of times.*

What is required for all experience and renders it possible is the understanding, and the first that is added by it is not that it renders the representation of objects clear, but that it really renders the representation of any object for the first time possible. This takes place by the understanding transferring the order of time to the phenomena and their existence, and by assigning to each of them as to a consequence a certain *a priori* determined place in time, with reference to antecedent phenomena, without which place, phenomena would not be in accord with time, which determines *a priori* their places to all its parts. In other words, what happens or follows must follow according to a general rule on

that which was contained in a previous state. We thus get a series of phenomena which, by means of the understanding, produces and makes necessary in the series of possible perceptions the same order and continuous coherence which exists *a priori* in the form of internal intuition (time), in which all perceptions must have their place.

That something happens is therefore a perception which belongs to a possible experience, and this experience becomes real when I consider the phenomenon as determined with regard to its place in time, that is to say, as an object which can always be found, according to a rule, in the connection of perceptions. This rule, by which we determine everything according to the succession of time, is this: the condition under which an event follows at all times (necessarily) is to be found in what precedes. All possible experience, therefore, that is, all objective knowledge of phenomena with regard to their relation in the succession of time, depends on the principle of sufficient reason.

The proof of this principle rests on the following considerations. All empirical knowledge requires synthesis of the manifold by imagination, which is always successive. That succession, however, in the imagination is not at all determined with regard to the order in which something precedes and something follows. If that synthesis, however, is a synthesis of apperception (of the manifold in a given phenomenon), then the order is determined in the object, or, to speak more accurately, there is then in it an order of successive synthesis which determines the object, and according to which something must nec-

essarily precede, and, when it is once there, something else must necessarily follow. If, therefore, my perception is to contain the knowledge of an event, or something that really happens, it must consist of an empirical judgment, by which the succession is supposed to be determined, so that the event presupposes another phenomenon in time on which it follows necessarily and according to a rule. If it were different, if the antecedent phenomenon were there, and the event did not follow on it necessarily, it would become to me a mere play of my subjective imagination, or if I thought it to be objective, I should call it a dream. It is therefore the relation of phenomena (as possible perceptions) according to which the existence of the subsequent (what happens) is determined in time by something antecedent necessarily and by rule, or, in other words, the relation of cause and effect, which forms the condition of the objective validity of our empirical judgments with regard to the series of perceptions, and therefore also the condition of the empirical truth of them, and of experience. The principle of the causal relation in the succession of phenomena is valid, therefore, for all objects of experience, also (under the conditions of succession), because that principle is itself the ground of the possibility of such experience.

Here, however, we meet with a difficulty that must first be removed. The principle of the causal connection of phenomena is restricted in our formula to their succession, while in practice we find that it applies also to their co-existence, because cause and effect may exist at the same time. For example, the warmth of the room comes from the fire now present in it. The greater part

of the active causes in nature are of this sort, and the succession of these effects in time is due only to this, that a cause can not produce its whole effect in one moment. But at the moment at which an effect first arises it is always co-existent with the causality of its cause, because if that had ceased one moment before, the effect would never have happened. Here we must well consider that what is thought of is the *order*, not the *lapse* of time, and that the relation remains, even if no time had lapsed. The time between the causality of the cause and its immediate effect can be *vanishing* (they may be simultaneous), but the relation of the one to the other remains for all that determinable in time. A ball placed on a soft cushion produces a depression which is simultaneous with the ball, but the depression does not produce the ball.

This causality leads to the concept of action, that to the concept of force, and lastly, to the concept of substance. Wherever there is action, therefore activity and force, there must be substance, and in this alone, the seat of that fertile source of phenomena can be sought. Action itself implies the relation of the subject of the causality to the effect. As all effect consists in that which happens, that is, in the changeable, indicating time in succession, the last subject of it is the *permanent*, as the substratum of all that changes, that is, substance.

Another phase demands attention. Hitherto the consideration has concerned itself with the law of the succession of phenomena upon each other. What must now be investigated is the transition from the not-being of a state into that state, even though it contained no quality

whatever as a phenomenon. This arising, as has been shown in the first Analogy, does not concern the substance (because the substance never arises), but its state only. It is therefore mere change, and not an arising out of nothing. When such an arising is looked upon as the effect of a foreign cause, it is called creation. This can never be admitted as an event among phenomena, because its very possibility would destroy the unity of experience. If, however, we consider all things, not as phenomena, but as things in themselves and objects of the understanding only, then, though they are substances, they must be considered as dependent in their existence on a foreign cause. Our words would then assume quite a different meaning, and no longer be applicable to phenomena, as possible objects of experience.

How anything can be changed at all, how it is possible that one state in a given time is followed by another at another time, of that we have not the slightest conception *a priori*. We want for that a knowledge of real powers, which can be given empirically only: for instance, a knowledge of motive powers, or what is the same, a knowledge of certain successive phenomena (as movements) which indicate the presence of such forces. What can be considered *a priori*, according to the law of causality and the conditions of time, is the form of every change, the condition under which alone, as an arising of another state, it can take place (its contents, that is, the state, which is changed, being what it may), and therefore the succession itself of the states (that which has happened). Kant adds that he is not speaking of the change of certain relations, but of the change of a state. There-

fore when a body moves in a uniform way, it does not change its state of movement, but it does so when its motion increases or decreases.

This discussion has shown how it is possible to know *a priori* a law of changes, as far as their form is concerned. We are only anticipating our own apprehension, the formal conditions of which, as it dwells in us before all given phenomena, may well be known *a priori*. In the same manner therefore in which time contains the sensuous condition *a priori* of the possibility of a continuous progression of that which exists to that which follows, the understanding, by means of the unity of apperception, is a condition *a priori* of the possibility of a continuous determination of the position of all phenomena in that time, and this through a series of causes and effects, the former producing inevitably the existence of the latter, and thus rendering the empirical knowledge of the relations of time valid for all times (universally) and therefore objectively valid.

In connection with the foregoing discussion it seems advisable to call attention to some aspects of Kant's work which bear directly on the conception of causality. A complete unfolding of the implications connected with the causal principle would give an explanation of the relations existing between all the different parts of reality. Such an explanation in all its completeness Kant holds to be impossible. But by a very subtle and perplexing analysis of experience and its grounds he indicates the different problems connected with the general principle. As in this discussion he emphasizes

now one and then another difficulty to be overcome, many different interpretations of his position are made possible.

If one reads Kant's discussion of causality in the light of what he says in other places, the bases of different interpretations of his doctrine of causality come to light. One of Kant's most fundamental contentions is that the objects of experience stand in organic relation to consciousness. Consciousness must know its objects for otherwise it would have no conscious experience. It seems necessary, therefore, that objects should conform to the laws of consciousness. Some hold that from this it is necessary to assert that the real is the rational. Furthermore since the relation between consciousness and its object is inner and organic, they hold that it is not correctly conceived by means of the causal relation. On the objective side of this organic whole, we find the laws of consciousness objectified. The relation found here, it is maintained, can not be expressed in terms of necessary sequence but must be considered as a logical or teleological unity of organic parts. The relation then appears to be one of necessary implication, or the relation of ground to consequence. In this reduction, time as a factor in the causal relation vanishes.

As was stated at the outset, this point of view is based upon a very real and important aspect of Kant's position. It may be that this point of view can be elaborated in such a manner as to do no violence to either term of the subject-object relation. Ordinarily however, this point of view takes a form in which objects depend upon subject to such an extent that the real force of the

subject-object relation is lost. When this is the case, the view is not only opposed to many of Kant's explicit statements, but is also opposed to the position which was its starting point. One should not forget that in the subject-object relation, the object is just as real as the subject; no priority is to be asserted of either. It is a mistake, therefore, from this point of view, to take the position that consciousness precedes and produces objectivity.

Since it is impossible to reduce either into terms of the other, and since both of them and their relation to each other seem to depend upon more ultimate conditions, the way is open to another aspect of Kant's position concerning cause. Consciousness and with it the entire phenomenal world seem to Kant to depend upon material and processes arising from the activity of things in themselves upon the noumenal conditions of the self. Our concern here is not with the ultimate nature either of the activity or of the synthetic processes. The important point for the consideration here is that it is necessary to assume them as conditions which produce or ground our experience. These conditions are not to be conceived in temporal or spatial terms since space and time apply only to the resultant phenomena. In so far as the changes taking place in experience are supposed to depend upon these assumed but unknown conditions, the true nature of causality in itself is unknown.

Another phase, the temporal aspect, of causality is explicitly considered in the Principles where Kant is concerned with the *a priori* elements of physical science. Before proceeding to this specific question and its re-

sults, it is necessary to refer once more to Kant's general position concerning the relation between consciousness and objects. Consciousness of time, as the most primitive form of consciousness, involves the necessity of the real connection of elements in an object (substance), the real connection of happenings in time (causality), the real spatial co-existence and mutual determinations of objects in a system (reciprocity). These are the objective side of that primitive subject-object relationship without which there is no consciousness. Hence no further demonstration of the *a priori* of these elements is required, and there must be an objective causal connection between events taking place in time.\*

\* Some critics have found a fundamental inconsistency in Kant's position when he holds that while the *general* principle of causality is *a priori*, *particular* laws of nature can only be learned from experience, and so are *a posteriori*. To us, Kant's position does not seem inconsistent, for he has exhaustively shown that certain principles are necessary if human beings are to have any experience at all. This being the case, it is possible to predict with certainty that such principles must always be present in human experience. In other words, these principles as necessary elements in human experience are known *a priori*. While we can predict with complete certainty what forms our experience will take, we can in no wise predict what the content of those forms will be. Therefore, Kant holds that the content of the causal principle as well as the content of the principle of substance must always be given. That is, even though we must assume a general disposition, on the part of the subject, to objectify and to relate events causally, we are equally constrained to look to experience to furnish the *material*. In other words, what the qualities are that particular things are to have, and what the things or events are that are to be related causally, or what the particular laws of causal relation are, these experience only can determine.

Causality always involves change. In explaining an event, a preceding event is required. Even supposing that the event by which it is to be explained is contemporaneous, as is the case in so many causes and effects in nature, that does not after all eliminate the necessity of a time order. Even though cause and effect co-exist, taken together they are facts that take place in time and as such are facts whose place in the time order is determined by preceding changes, without which they would not be related in the manner in which we observe them to be related. It must in no wise be taken from this that what happens is thus ultimately explained. What is stated here concerns merely the way in which we are required to view these happenings. If we take time abstractly, the significance of any moment of time is determined by the other moments in the time series. It is impossible to reach any particular time without passing through the intervening times. What is true of pure time is true of phenomena in time, therefore phenomena stand in necessary temporal relationship to one another.

Causality manifests itself in time sequence and is therefore under the necessary determinations of time sequence. Kant holds that time sequence is a necessary condition for a causal relation between phenomena. We are now in a position to see the connection between Kant and Hume. Both insist, so far as the known significance of causality is concerned, that it can be analyzed into a necessary temporal relation of antecedent and consequent phenomena. The real productive forces, however, are asserted by both to be unknown and un-

knowable. They agree again in holding that concerning any particular causes and effects, we are entirely dependent upon experience. Anything may be the cause of anything else, for all that we can predict. But there is this important difference between them in that Hume ordinarily says that the causal principle is derived from the succession of separate experiences. In other words, that it is a habit arising from experience. But Kant has shown that it is essentially bound up with those conditions without which there would be no human experience whatever. Kant's position would be that causation can not arise from empirical generalization for that arises from experience and that in turn implies for its very existence those connective principles which are supposed to have been derived from it. In just so far as Hume holds that cause is derived through habit from a succession of *separate* experiences, just so far is the Kantian position a refutation of Hume.

C. THIRD ANALOGY. PRINCIPLE OF CO-EXISTENCE,  
ACCORDING TO THE LAW OF RECIPROCITY OR COMMUNITY:  
*All substances, so far as they can be perceived as co-existent  
in space, are always affecting each other reciprocally.*

Things are co-existent when, in empirical intuition, the perception of the one can follow upon the perception of the other, and *vice versa*, which, as was shown in the second principle, is impossible in the temporal succession of phenomena. Thus I may first observe the moon and afterwards the earth, or, conversely also, first the earth and afterwards the moon, and because the perceptions of these objects can follow each other in both ways, I

say that they are co-existent. Now co-existence is the existence of the manifold in the same time. Time itself, however, can not be perceived, so that we might learn from the fact that things exist in the same time, that their perceptions can follow each other reciprocally. The synthesis of imagination in apprehension would, therefore, give us each of these perceptions as existing in the subject, when the other is absent, and *vice versa*: it would never tell us that the objects are co-existent, that is, that if one is there, the other also must be there in the same time, and this by necessity, so that the perceptions may follow each other reciprocally. Hence we require a concept of understanding of the reciprocal sequence of determinations of things existing at the same time, but outside each other in order to be able to say, that the reciprocal sequence of the perceptions is founded in the object, and thus to represent their co-existence as objective. The relation of substances, however, of which the first has determinations, the ground of which determinations is contained in the other, is the relation of influence, and if, conversely also, the first contains the ground of determinations in the latter, the relation is that of community or reciprocity. Hence the co-existence of substances in space can not be known in experience otherwise but under the supposition of reciprocal action: and this is therefore the condition also of the possibility of things themselves as objects of experience.

We have here another example of Kant's transcendental proof. Starting from a world of interrelated objects, he asks how is such a world possible. In answer to this question Kant shows that the category of reciprocity is

necessarily involved. Phenomena can not be determined by space since space is not directly perceived, and yet they must be determined in relation to each other in some manner. This is only possible if we look upon sensations as qualities of substances which mutually determine each other. Thus only can we apprehend different objects as appearing to us as unified into a single world. Kant emphasizes this in a note: For the unity of the world, the whole in which all phenomena are supposed to be combined, is manifestly a mere consequence of the tacitly assumed principle of the community of all substances which co-exist; for, if they were isolated, they would not constitute parts of one whole; and if their connection (the reciprocity of the manifold) were not necessary as the presupposition of the co-existence, we could never argue from the latter, which is a merely ideal relation, to the former, which is a real relation of them. We have, however, shown that community is the ground of the possibility of any empirical knowledge of co-existence, and, therefore, we can quite legitimately conclude from the latter to the former as its necessary precondition.

#### IV. POSTULATES OF EMPIRICAL THOUGHT IN GENERAL

1. What agrees with the formal conditions of experience (in intuition and in concepts) is possible.
2. What is connected with the material conditions of experience (sensation) is real.
3. That which, in its connection with the real, is determined by universal conditions of experience, is (exists as) necessary.

The categories of modality have this peculiar character that, as determining an object, they do not enlarge in the least the concept to which they are attached as predicates, but express only a relation to our faculty of knowledge. Even when the concept of a thing is quite complete, I can still ask with reference to that object, whether it is possible only, or real also, and, if the latter, whether it is necessary? No new determinations of the object are thereby conceived, but it is only asked in what relation it (with all its determinations) stands to the understanding and its empirical employment, to the empirical faculty of judgment, and to reason, in its application to experience?

The principles of modality are therefore nothing but explanations of the concepts of possibility, reality, and necessity, in their empirical employment, confining all categories to an empirical employment only, and prohibiting their transcendent use. For if these categories are not to have a purely logical character, expressing the forms of thought analytically, but are to refer to things, their possibility, reality, or necessity, they must have reference to possible experience and its synthetical unity, in which alone objects of knowledge can be given.

The principles of modality are not objectively synthetical, because the predicates of possibility, reality, and necessity do not in the least increase the concept of which they are predicated, by adding anything to its representation. But as nevertheless they are synthetical, they are so subjectively only, that is, they add to the concept of a (real) thing, without predicating anything new, the peculiar faculty of knowledge from which it

springs and on which it depends, so that, if in the understanding the concept is only connected with the formal conditions of experience, its object is called *possible*; if it is connected with perception (sensation as the material of the senses), and through it determined by the understanding, its object is called *real*; while, if it is determined through the connection of perceptions, according to concepts, its object is called *necessary*. The principles of modality therefore predicate nothing of a concept except the act of the faculty of knowledge by which it is produced.

It is possible to say that the Principles sum up, in a general way, the preceding development of the Critique. The progress has been from the factual (the given perceptions) to a scientifically organized body of knowledge in which reality appears in all its relations as necessarily determined. The Postulates *may* be interpreted as indicating that Kant was now seeking to break down the over-accentuated separation between the different faculties of knowledge.

In general, these Principles show the necessary stages through which individual and race must pass to come to scientific knowledge, and finally to complete self-consciousness. We do not mean that each Principle represents a distinct and separate period though one or another of them would fairly well characterize the grade of knowledge at a particular stage. We mean to assert that these are logical moments in thought representing a certain relation between subject and objectivity, or nature. All of these moments are present, to some ex-

tent, either implicitly or explicitly in the thinking at all stages of knowledge.

If one takes the point of view that reality exists as an independent world over against the subject, a reality which he can come to know with varying degrees of exactness, then one must say of these Postulates that they are not ontological, but that they simply indicate a progressive development which passes from a bare knowledge of reality to a knowledge of the laws of the relations of things. If, on the contrary, one takes the position that reality is unknowable (and this would seem to be Kant's dominating point of view), then from this point of view the Postulates indicate the relation between consciousness and a *phenomenal* world. Such a phenomenal world, of course, need not be subjective, that is, it may be the world which science attempts to know, the world of possible experience. The Postulates, from this stand-point, show a progressive deepening of the subject's understanding of laws which he may have unconsciously furnished to nature, a process culminating in explicit self-consciousness. To some (Hegelians and Neo-Hegelians) it seems a short and necessary step to a denial of the existence of a realm of things in themselves. This is equivalent to saying that the world of possible experience (the phenomenal world of Kant) is the real world. This involves the position that the real world is rational. At this point the entire ontological problem changes, and hence the significance of the Postulates also changes.

In the course of his discussion of the second Postulate, that of reality, Kant says that wherever perception and its train can reach, according to our empirical laws,

there our knowledge also of the existence of things can reach. But if we do not begin with experience, or do not proceed according to the laws of the empirical connection of phenomena, we are only making a vain display, as if we could guess and discover the existence of anything. Here he then places, in the second edition, his Refutation of Idealism. On account of the way in which it throws light on Kant's phenomenalism, it is thought best to give this refutation in its entirety.

### REFUTATION OF IDEALISM

Idealism (I mean *material* idealism) is the theory which declares the existence of objects in space, without us, as either doubtful only and not demonstrable, or as false and impossible. The *former* is the *problematical* idealism of Descartes, who declares one empirical assertion only to be undoubted, namely, that of *I am*; the *latter* is the *dogmatical* idealism of Berkeley, who declares space and all things to which it belongs as an inseparable condition, as something impossible in itself, and, therefore, the things in space as mere imaginations. Dogmatic idealism is inevitable, if we look upon space as a property belonging to things in themselves, for in that case space and all of which it is a condition, would be a non-entity. The ground on which that idealism rests has been removed by us in the transcendental *Æsthetic*. Problematical idealism, which asserts nothing, but only pleads our inability of proving any existence except our own by means of immediate experience, is reasonable and in accordance with a sound philosophical mode of thought, which allows of no decisive judgment, before a

sufficient proof has been found. The required proof will have to demonstrate that we may have not only an *imagination*, but also an *experience* of external things, and this it seems can hardly be effected in any other way except by proving that even our internal experience, which Descartes considers as undoubted, is possible only under the supposition of external experience.

### *Theorem*

*The simple, but empirically determined Consciousness of my own existence, proves the Existence of objects in space outside myself.*

### *Proof*

I am conscious of my own existence as determined in time, and all determination in time presupposes something *permanent* in the perception. That *permanent*, however, can not be an intuition within me, because all the causes which determine my existence, so far as they can be found within me, are representations, and as such require something permanent, different from them, in reference to which their change, and therefore my existence in time in which they change, may be determined. The perception of this permanent, therefore, is possible only through a thing outside me, and not through the mere *representation* of a thing outside me, and the determination of my existence in time is, consequently, possible only by the existence of real things, which I perceive outside me. Now, as the consciousness in time is necessarily connected with the consciousness of the possibility of that determination of time, it is also nec-

essarily connected with the existence of things outside me, as the condition of the determination of time. In other words, the consciousness of my own existence is, at the same time, an immediate consciousness of the existence of other things.

Note 1.—It will have been perceived that in the foregoing proof the trick played by idealism has been turned against it, and with greater justice. Idealism assumed that the only immediate experience is the internal, and that from it we can no more than *infer* external things, though in an untrustworthy manner only, as always happens if from given effects we infer *definite* causes: it being quite possible that the cause of the representations, which are ascribed by us, it may be wrongly, to external things, may lie within ourselves. We, however, have proved that external experience is really immediate,\* and that only by means of it, though not the consciousness of my own existence, yet its determination in time, that is, internal experience, becomes possible. No doubt

\*Kant's Footnote. The *immediate* consciousness of the existence of external things is not simply assumed in the preceding theorem, but proved, whether we can understand the possibility of this consciousness or not. The question with regard to that possibility would come to this, whether we have an internal sense only, and no external sense, but merely an external imagination. It is clear, however, that, even in order to imagine only something as external, that is, to represent it to the senses in intuition, we must have an external sense, and thus distinguish immediately the mere receptivity of an external intuition from that spontaneity which characterizes every act of imagination. For merely to imagine an external *sense* would really be to destroy the faculty of intuition, which is to be determined by the faculty of imagination.

the representation of *I am*, which expresses the consciousness that can accompany all thought, is that which immediately includes the existence of a subject; but it does not yet include a *knowledge* of it, and therefore no empirical knowledge, that is, experience. For that we require, besides the thought of something existing, intuition also, and in this case internal intuition in respect to which, that is, to time, the subject must be determined. For that purpose external objects are absolutely necessary, so that internal experience itself is possible, mediately only, and through external experience.

Note 2.—This view is fully confirmed by the empirical use of our faculty of knowledge, as applied to the determination of time. Not only are we unable to perceive any determination of time, except through a change in external relations (motion) with reference to what is permanent in space (for instance, the movement of the sun with respect to terrestrial objects), but we really have nothing permanent to which we could refer the concept of a substance, as an intuition, except *matter* only: and even its permanence is not derived from external experience, but presupposed *a priori* as a necessary condition of all determination of time, and therefore also of the determination of the internal sense with respect to our own existence through the existence of external things. The consciousness of myself, in the representation of the *ego*, is not an intuition, but a merely *intellectual* representation of the spontaneity of a thinking subject. Hence that *ego* has not the slightest predicate derived from intuition, which predicate, as *permanent*, might serve as the correlate of the determination of time in the

internal sense: such as is, for instance, *impermeability* in matter, as an *empirical intuition*.

Note 3.—Because the existence of external objects is required for the possibility of a definite consciousness of ourselves, it does not follow that every intuitional representation of external things involves, at the same time, their existence; for such a representation may well be the mere effect of the faculty of imagination (in dreams as well as in madness); but it can be such an effect only through the reproduction of former external perceptions, which, as we have shown, is impossible without the reality of *external* objects. What we wanted to prove here was only that internal experience in general is possible only through external experience in general. Whether this or that supposed experience be purely imaginary, must be settled according to its own particular determinations, and through a comparison with the criteria of all real experience.\*

Before leaving the consideration of the Principles, it may be helpful to indicate the general aspects of the problem with which Kant has been concerned. The problem of the schematism was to show how the categories apply to the objects with which physical science is concerned, and the Principles are the actual carrying out of the schematism, in so far as they state the *a priori*

\* The insistence, in the refutation, upon the organic nature of the subject-object relationship in knowledge, may appear to justify that interpretation of Kant made by the objective idealists. But it must be remembered that Kant is here dealing with a world of knowledge—the phenomenal world,—which is of course determined as to its form by the unity of consciousness.

synthetic judgments which the categories enable us to make concerning nature, that is, the subject-matter of physical science.

From this may be seen that Kant's position is not arrived at through a combination of rationalism and empiricism, but that his philosophy is a real empiricism since the principles of knowledge as well as the content are reached through an analysis of concrete experience.

This subject-matter of physical science appears in consciousness through the process of perception, and Kant has distinguished between the external sense, the form of which is space, and the internal sense, the form of which is time. So in his treatment of the four Principles he calls the first two mathematical, and the last two dynamical.

In the Axioms, he points out how the objects of external sense appear to us by adding part to part, that is, as aggregates, and so are extensive magnitudes. In this way the pure mathematics based on pure perception becomes valid for the objects which fill space, and so for applied mathematics.

In the Anticipations we have a situation which, at first glance, seems to be subjective rather than objective, for he starts from the awareness of degrees of intensity in our sensations. But upon reflection, degrees of intensity involve quantitative considerations, and so the Anticipations after all belong to the mathematical Principles. The extensive magnitude of two objects may be the same, and yet the fact that they have different weights enables him to infer that there is degree

in the intensity of space filling objects. This leads him to the dynamical theory of matter.

So far he has been concerned with the external relationships involved in extensive or intensive magnitudes. Now another side of nature engages his attention, namely, that nature which, while it is constantly in a state of change, is after all a systematized whole, and the changes within which whole, must be taken as inner determinations of each other. Here he has the problem of the dynamical Principles.

The first of the Analogies is substance. Substance is necessitated as a permanent substratum without which change is unintelligible. Creation, that is, change from nothing into something is phenomenally impossible. The only change which is phenomenally possible is change of state or alteration. This makes clear why the principle of conservation of energy is such a basic principle in physical science.

The second of the Analogies is causation. In the preceding Analogy there was a recognition that change is always relative to a permanent. Here the situation to be considered arises out of the realization that every state in a series is necessarily connected with another state, and that in a time order. In a series of sensations, their order may be entirely accidental and arbitrary; in a series of phenomena on the contrary, the order is irreversible and necessary. For only through this irreversibility and necessity of the order, do we call the series objective, and with this comes the consequence that in order to have a phenomenal world of objects, we must look upon each event as the necessary result of a preceding cause.

In the third of the Analogies, reciprocity, we have a further deepening of the insight. The mathematical Principles in treating of quantities, involved only external relationships; in substance an internal relationship is expressed; in causation the internal feature is made more explicit; whereas in reciprocity or interaction we reach a culmination of this process so far as mechanical relationship is concerned, and come to a situation in which nature is considered as a whole, and its unity is intelligible through the mutual, that is, reciprocal inner relation of the parts of the whole. Without the principle of reciprocity, that is, an inner, mutual determination of the organically related parts of the whole, nature as a unity would be impossible.

The Postulates compose the fourth of the Principles. Hitherto, even though the categories have been used, nature was taken as something external to the knowing subject because the subject has been unconscious of the part that he has taken in determining the world of phenomenal reality. Now the consideration has to do with the relation of the knowing subject to nature, and the Postulates express an increasingly internal character of this relation due to the ever increasing self-consciousness in the employment of the categories. The knowing subject is now seen to be a vitally determining factor in the character of the world of phenomena. That which is consistent with the forms of experience is possible; that which is connected with the material conditions of experience is real; and that which, in its connection with the real, is determined by the universal conditions of experience, is necessary.

## TRANSITION TO THE TRANSCENDENTAL DIALECTIC

We have now not only traversed the whole domain of the pure understanding, and carefully examined each part of it, but we have also measured its extent, and assigned to everything in it its proper place. This domain, however, is an island and enclosed by nature itself within limits that can never be changed. It is the country of truth, but surrounded by a wide and stormy ocean, the true home of illusion, where many a fog bank, and ice that soon melts away tempt us to believe in new lands, while constantly deceiving the adventurous mariner with vain hopes, and involving him in adventures which he can never leave, and yet can never bring to an end. Before we venture ourselves on this sea, in order to explore it on every side, and to find out whether anything is to be hoped for there, it will be useful to glance once more at the map of that country which we are about to leave, and to ask ourselves, first, whether we ought not be content with what it contains, nay, whether we must not be content with it, supposing that there is no solid ground anywhere else on which we could settle; secondly, by what title we possess even that domain, and may consider ourselves safe against all hostile claims.

We have found thus far in the Analytic that the categories require, besides the pure concepts of the understanding, certain determinations of their application to sensibility in general (schemata). Without them, they would not be concepts by which an object can be known and distinguished from other objects, but only so many

ways of thinking an object for possible intuitions, and giving to it, according to one of the functions of the understanding, its meaning. Therefore the pure concepts of the understanding admit of empirical use only, and can be referred merely, as general conditions of a possible experience, to objects of the senses, never to things in themselves.

Appearances so far as they are thought as objects under the unity of the categories are called *phenomena*. But if I admit things which are objects of the understanding only, and nevertheless can be given as objects of a non-sensuous intuition, such things would be called *noumena*.

If all thought (by means of the categories) is taken away from empirical knowledge, no knowledge of any object remains, because nothing can be thought by mere intuition, and the mere fact that there is within me an affection of my sensibility, establishes in no way any relation of such a representation to any object. If, on the contrary, all intuition is taken away, there always remains the form of thought, that is, the mode of determining an object for the manifold of a possible intuition. In this sense the categories may be said to extend further than sensuous intuition, because they can think objects in general without any regard to the special mode of sensibility in which they may be given; but they do not thus prove a larger sphere of objects, because we can not admit that such objects can be given, without admitting the possibility of some intuition not sensuous, for which we have no right whatever.

## TRANSCENDENTAL LOGIC

### PART II

## TRANSCENDENTAL DIALECTIC

At the beginning of the Transcendental Logic, general logic was said to involve two parts: transcendental analytic and transcendental dialectic. It was there said (p. 45) that in the dialectic, the understanding runs the risk of making, through mere sophisms, a material use of the purely formal principles of the pure understanding, and thus of judging indiscriminately of objects which are not given to us, nay, perhaps can never be given. In transcendental logic, the transcendental dialectic must therefore form a critique of that dialectical semblance.

Logical illusion, which consists in a mere imitation of the forms of reason, arises entirely from want of attention to logical rules. It disappears at once, when our attention is roused. Transcendental illusion, on the contrary, does not disappear, although it has been exposed, and its worthlessness rendered clear by means of transcendental criticism, as, for instance, the illusion inherent in the proposition that the world must have a beginning in time. The cause of this is that there exist in our reason (considered subjectively as a faculty of human knowledge) principles and maxims of its use, which have the appearance of objective principles, and lead us to mistake the subjective necessity of a certain connection of our con-

cepts in favor of the understanding for an objective necessity in the determination of things in themselves. This illusion is as impossible to avoid as it is to prevent the sea from appearing to us higher at a distance than on the shore, because we see it by higher rays of light; or to prevent the moon from appearing, even to an astronomer, larger at its rising, although he is not deceived by that illusion.

Transcendental dialectic must, therefore, be content to lay bare the illusion of transcendental judgments and guard against its deceptions—but it will never succeed in removing the transcendental illusion (like the logical), and putting an end to it altogether. For we have here to deal with a natural and inevitable illusion, which itself rests upon subjective principles, representing them to us as objective, while logical dialectic, in removing sophisms has to deal merely with the mistake in applying the principles, or with an artificial illusion produced by an imitation of them. There exists, therefore, a natural and inevitable dialectic of pure reason, not one in which a mere bungler might get entangled from want of knowledge, or which a sophist might artificially devise to confuse rational people, but one that is inherent in, and inseparable from human reason, and which, even after its illusion has been exposed, will never cease to fascinate our reason, and to precipitate it into momentary errors, such as require to be removed again and again.

Reason, in the broad sense, includes all the faculties of knowledge. If the understanding is a faculty for producing unity among phenomena, according to rules,

reason, in the narrow sense, is the faculty for producing unity among the rules of the understanding, according to principles. Reason, in the narrow sense, never looks directly to experience, or to any object, but to the understanding, in order to impart *a priori* through concepts to its manifold kinds of knowledge a unity that may be called the unity of reason, and is very different from the unity which can be produced by the understanding.

The merely formal and logical procedure of reason in syllogisms gives us sufficient hints as to the ground on which the transcendental principle of synthetical knowledge, by means of pure reason, is likely to rest.

Reason in its logical employment, looks for the general condition of its judgment (the conclusion), and the syllogism produced by reason is itself nothing but a judgment reached through subsumption of its condition under a general rule (the major). But as this rule is again liable to the same experiment, reason having to seek, as long as possible, the condition of a condition (by means of a pro-syllogism), it is easy to see that it is the peculiar function of reason (in its logical use) to find for every conditioned knowledge of the understanding the unconditioned, whereby the unity of that knowledge may be completed. The transcendental concept of reason is, therefore, nothing but the concept of the totality of the conditions of anything given as conditioned. As therefore the unconditioned alone renders a totality of conditions possible, and as conversely the totality of conditions must always be unconditioned, it follows that a pure concept of reason in general may be explained as a con-

cept of the unconditioned, so far as it contains a basis for the synthesis of the conditioned.

As many kinds of relations as there are, which the understanding represents to itself by means of the categories, so many pure concepts of the reason we shall find, that is, first, the *unconditioned* of the *categorical* synthesis in a subject; secondly, the *unconditioned* of the *hypothetical* synthesis of the members of a series; thirdly, the *unconditioned* of the *disjunctive* synthesis of the parts of a system.

These concepts of the reason Kant calls *transcendental ideas*. They are concepts of pure reason, so far as they regard all empirical knowledge as determined by an absolute totality of conditions. They are not mere fancies, but supplied to us by the very nature of reason, and referring by necessity to the whole use of the understanding. They are, lastly, transcendent, as overstepping the limits of all experience which can never supply an object adequate to the transcendental idea. Although we must say that all transcendental concepts of reason are ideas only, they are not therefore to be considered as superfluous and useless. For although we can not by them determine any object, they may nevertheless, even unobserved, supply the understanding with a canon or rule of its extended and consistent use, by which, though no object can be better known than it is according to its concepts, yet the understanding may be better guided onwards in its knowledge, not to mention that they may possibly render practicable a transition from physical to practical concepts, and thus impart to moral ideas a certain strength and connection with the speculative knowledge of reason.

We see that the relation of the representations of which we can form a concept or an idea can only be three-fold: first, the relation to a subject; secondly, the relation to the manifold of the phenomenal object; thirdly, the relation to all things in general. All pure concepts in general aim at a synthetical unity of representations, while concepts of pure reason (transcendental ideas) aim at an unconditioned synthetical unity of all conditions. All transcendental ideas, therefore, can be arranged in three classes: The *first* containing the absolute (unconditioned) *unity of the thinking subject*; the *second* the absolute *unity of the series of conditions of phenomena*; the *third* the absolute *unity of the condition of all objects of thought in general*.

The thinking subject is the object-matter of *psychology*, the system of all phenomena (the world) the object-matter of *cosmology*, and the being which contains the highest condition of the possibility of all that can be thought (the being of all beings), the object-matter of *theology*. Thus it is pure reason which supplies the idea of a transcendental science of the soul, of a transcendental science of the world, and, lastly, of a transcendental science of God. Even the mere plan of any one of these three sciences does not come from the understanding, even if connected with the highest logical use of reason, that is, with all possible conclusions, leading from one of its objects (phenomenon) to all others, and on to the most remote parts of any possible empirical synthesis,—but is altogether a pure and genuine product or rather problem of pure reason.

What kinds of pure concepts of reason are compre-

hended under these three titles of all transcendental ideas will be fully explained later. They follow the thread of the categories, for pure reason never refers directly to objects, but to the concepts of objects framed by the understanding. Nor can it be rendered clear, except hereafter in a detailed explanation, how first, reason simply by the synthetical use of the same function which it employs for categorical syllogisms is necessarily led on to the concept of the absolute unity of the thinking subject; secondly, how the logical procedure in hypothetical syllogisms leads to the idea of something absolutely unconditioned, in a series of given conditions, and how, thirdly, the mere form of the disjunctive syllogism produces necessarily the highest concept of reason, that of a being of all beings; a thought which, at first sight, seems extremely paradoxical.

No objective deduction, like that given of the categories, is possible with regard to these transcendental ideas; they are ideas only, and for that very reason they have no relation to any object corresponding to them in experience. What has been given in the present discussion is the only thing that could be given, a subjective deduction.

We can easily perceive that pure reason has no other aim but the absolute totality of synthesis *on the side of conditions* (whether of inherence, dependence, or concurrence), and that it has nothing to do with the absolute completeness on *the part of the conditioned*. It is the former only which is required for presupposing the whole series of conditions, and thus presenting it *a priori* to the understanding. If once we have a given condition,

complete and unconditioned itself, no concept of reason is required to continue the series, because the understanding takes by itself every step downward from the condition to the conditioned. The transcendental ideas therefore serve only for *ascending* in the series of conditions till they reach the unconditioned, that is, the principles. With regard to *descending* to the conditioned, there is no doubt a widely extended logical use which our reason may make of the rules of the understanding, but no transcendental one; and if we form an idea of the absolute totality of such a synthesis, as, for instance, of the whole series of all future changes in the world, this is only a thought that may be thought if we like, but is not presupposed as necessary by reason. For the possibility of the conditioned, the totality of its conditions only but not of its consequences, is presupposed. Such a concept therefore is not one of the transcendental ideas, with which alone we have to deal.

Finally, we can perceive, that there is among the transcendental ideas themselves a certain connection and unity by which pure reason brings all its knowledge into one system. There is in the progression from our knowledge of ourselves (the soul) to a knowledge of the world, and through it to a knowledge of the supreme being, something so natural that it looks like the logical progression of reason from premises to a conclusion. Whether there exists here a real though hidden relationship, such as we saw before between the logical and transcendental use of reason, is also one of the questions the answer to which can only be given in the progress of these investigations. For the present we have achieved what we wish

to achieve, by removing the transcendental concepts of reason, which in the systems of other philosophers are generally mixed up with other concepts, without being distinguished even from the concepts of the understanding, out of so equivocal a position; by being able to determine their origin and thereby at the same time their number, which can never be exceeded, and by thus bringing them into a systematic connection, marking out and enclosing thereby a separate field for pure reason.

In view of what has been said before, one may say that the object of a purely transcendental idea is something of which we have no concept, although the idea is produced with necessity according to the original laws of reason. Nor is it possible indeed to form an object that should be adequate to the demands of reason, a concept of the understanding, that is, a concept which could be shown in any possible experience, and rendered intuitive. It would be better, however, and less liable to misunderstandings, to say that we can have no knowledge of an object corresponding to an idea, but a problematic concept only.

The transcendental (subjective) reality, at least of pure concepts of reason, depends on our being led to such ideas by a necessary syllogism of reason. There will be syllogisms, therefore, which have no empirical premises, and by means of which we conclude from something which we know to something else of which we have no concept, and to which, constrained by an inevitable illusion, we nevertheless attribute objective reality. As regards their result, such syllogisms are rather to be called sophistical than rational, although, as regards

their origin, they may claim the latter name, because they are not purely fictitious or accidental, but products of the very nature of reason. They are sophistications, not of men, but of pure reason itself, from which even the wisest of men can not escape. All he can do is, with great effort, to guard against error, though never able to rid himself completely of an illusion which constantly torments and mocks him.

Of these dialectical syllogisms of reason there are, therefore, three classes only, that is, as many as the ideas to which their conclusions lead. In the syllogism of the *first* class, I conclude from the transcendental concept of the subject, which contains nothing manifold, the absolute unity of the subject itself, of which, however, I have no concept in this regard. This dialectical syllogism I shall call the *transcendental paralogism*.

The *second* class of the so-called sophistical syllogisms aims at the transcendental concept of an absolute totality in the series of conditions to any given phenomenon; and I conclude from the fact that my concept of the unconditioned synthetical unity of the series is always self-contradictory, on the one side, to the correctness of the opposite unity, of which nevertheless I have no concept either. The state of reason in this class of dialectical syllogisms, I shall call the *antinomy* of pure reason.

Lastly, according to the *third* class of sophistical syllogisms, I conclude from the totality of conditions, under which objects in general, so far as they can be given to me, must be thought, the absolute synthetical unity of all conditions of the possibility of things in

general; that is to say I conclude from things which I do not know according to their mere transcendental concept, a being of all beings, which I can know still less through a transcendental concept, and of the unconditioned necessity of which I can form no concept whatever. This dialectical syllogism of reason I shall call the *ideal* of pure reason.

### THE PARALOGISMS OF PURE REASON

In the list of the transcendental concepts considered in the Analytic, there was one concept involved in all of them, which was the vehicle of all of them, and likewise transcendental. This is the concept, or if you will, the judgment *I think*. I, as thinking, am an object of the internal sense, and am called soul. The I, as a thinking being, is the object of psychology, which may be called the rational science of the soul, supposing that we want to know nothing about the soul except what, independent of all experience, can be deduced from the concept of I, so far as it is present in every act of thought.

We shall therefore follow the thread of the categories, with this difference, however, that as here the first thing which is given is a thing, the I, a thinking being, we must begin with the category of substance, by which a thing in itself is represented, and then proceed backwards, though without changing the respective order of the categories, as given before in our table. The topic of the rational science of the soul, from which has to be derived whatever else that science may contain, is therefore the following.

## I

The Soul is *substance*.

## II

As regards its quality, *simple*.

## III

As regards the different times in which it exists, numerically identical, that is *unity* (not plurality).

## IV

It is in relation to *possible* objects in space.

All concepts of pure psychology arise from these elements, simply by way of combination, and without the admixture of any other principle. The soul, taken as substance, taken simply as the object of the internal sense, gives us the concept of *immateriality*; and as simple substance, that of *incorruptibility*; its identity, as that of an intellectual substance, gives us *personality*; and all these three together, *spirituality*; its relation to objects in space gives us the concept of intercourse with *bodies*; the pure psychology thus representing the thinking substance as the principle of life in matter, that is, as soul, and as the ground of *animality*; which again, as restricted by spirituality, gives us the concept of *immortality*.

To these concepts refer four paralogisms of a transcendental psychology, which is falsely supposed to be a science of pure reason, concerning the nature of our thinking being. We can, however, use as the foundation of such a science nothing but the single, and in itself

perfectly empty, representation of the I, of which we can not even say that it is a concept, but merely a consciousness that accompanies all concepts. By this I, which thinks, nothing is represented beyond a transcendental subject of thoughts=x, which is known only through the thoughts that are its predicates, and of which, apart from them, we can never have the slightest concept, so that we are really turning round it in a perpetual circle, having already to use its representation, before we can form any judgment about it. And this inconvenience is really inevitable, because consciousness in itself is not so much a representation, distinguishing a particular object, but really a form of representation in general, in so far as it is to be called knowledge, of which alone I can say that I think something by it.

It must seem strange, however, from the very beginning, that the condition under which I think, and which therefore is a property of my own subject only, should be valid at the same time for everything which thinks, and that, depending on a proposition which seems to be empirical, we should venture to found the apodictical and general judgment, namely, that everything which thinks is such as the voice of my own consciousness declares it to be within me. The reason of it is, that we are constrained to attribute *a priori* to things all the qualities which form the conditions, under which alone we are able to think them. Now it is impossible for me to form the least representation of a thinking being by any external experience, but I can do it through self-consciousness only. Such objects therefore are nothing but a transference of my own consciousness to other

things, which thus, and thus only, can be represented as thinking beings. The proposition *I think* is used in this case, however, as problematical only; not so far as it may contain the perception of an existence (the Cartesian, *cogito, ergo sum*), but with regard to its mere possibility, in order to see what properties may be deduced from such a simple proposition with regard to its subject, whether such subject exists or not.

If our knowledge of thinking beings in general, so far as it is derived from pure reason, were founded on more than the *cogito*, and if we made use, at the same time, of observations on the play of our thoughts and the natural laws of the thinking self, derived from them, we should have before us an empirical psychology, which would form a kind of physiology of the internal sense, and perhaps explain its manifestations, but would never help us to understand such properties as do not fall under any possible experience (as, for instance, simplicity), or to teach apodictically anything touching the nature of thinking beings in general. It would not therefore be a rational psychology.

As the proposition *I think* (taken problematically) contains the form of every possible judgment of the understanding, and accompanies all categories as their vehicle, it must be clear that the conclusions to be drawn from it can only contain a transcendental use of the understanding which declines all admixture of experience, and of the achievements of which, after what has been said before, we cannot form any very favorable anticipations. We shall therefore follow it, with a critical eye, through all the predicaments of pure psychology.

I do not know any object by merely thinking, but only by determining a given intuition with respect to that unity of consciousness in which all thought consists; therefore, I do not know myself by being conscious of myself, as thinking, but only if I am conscious of the intuition of myself as determined with respect to the function of thought. All modes of self-consciousness in thought are therefore by themselves not yet concepts of understanding of objects (categories), but mere logical functions, which present no object to our thought to be known, and therefore do not present myself either as an object to be known. It is not a consciousness of the *determining*, but only that of the *determinable* self, that is, of my internal intuition (so far as the manifold in it can be connected in accordance with the general condition of the unity of apperception in thought) which forms the object.

i. In all judgments I am always the *determining subject* only of the relation which constitutes the judgment. That I, who think, can be considered in thinking as *subject* only, and as something not simply inherent in the thinking, as predicate, is an apodictical and even *identical* proposition; but it does not mean that, as an object, I am a *self-dependent being* or a *substance*. The latter would be saying a great deal, and requires for its support *data* which are not found in the thinking, perhaps (so far as I consider only the thinking subject as such) more than I shall ever find in it.

Kant concludes that in the first syllogism of transcendental psychology reason imposes upon us an apparent knowledge only, by representing the constant logical subject of thought as the knowledge of the real subject

in which that knowledge inheres. Of that subject, however, we have not and can not have the slightest knowledge, because consciousness is that which alone changes representations into thoughts, and in which therefore, as the transcendental subject, all our perceptions must be found. Beside this logical meaning of the I, we have no knowledge of the subject in itself, which forms the substratum and foundation of it and of all our thoughts. It signifies therefore a substance in idea only, and not in reality.

2. That the *Ego* of apperception, and therefore the *Ego* in every act of thought, is a *singular* which can not be dissolved into a plurality of subjects, and that it therefore signifies a logically simple subject, follows from the very concept of thinking, and is consequently an analytical proposition. But this does not mean that a thinking *Ego* is a *simple substance*, as rational psychology would have us believe for that would then indeed be a synthetical proposition. The concept of substance always relates to intuitions which, with me, can not be other but sensuous, and which therefore lie completely outside the field of the understanding and its thinking, which alone is intended here, when we say that the *Ego*, in thinking, is simple. It would indeed be strange, if what elsewhere requires so great an effort, namely, to distinguish in what is given by intuition what is substance, and still more, whether that substance can be simple (as in the case of the component parts of matter), should in our case be given to us so readily in what is really the poorest of all representations, and, as it were, by an act of revelation.

The nerve of the argument of rational psychology for the soul as a simple substance lies in the proposition that, in order to constitute a thought, the many representations must be comprehended under the absolute unity of the thinking subject. But this proposition can neither be proved from concepts, nor can it be derived from experience. As in the former paralogism therefore, so here also, the formal proposition of apperception, I think, remains the sole ground on which rational psychology ventures to undertake the extension of its knowledge. That proposition, I think, however, is only the form of apperception, that is a purely subjective condition. The simplicity of the representation of a subject is not therefore a knowledge of the simplicity of the subject.

3. The proposition of the identity of myself amidst the manifold of which I am conscious, likewise follows from the concepts themselves, and is therefore analytical; but the identity of the subject of which, in all its representations, I may become conscious, does not refer to the intuition by which it is given as an object, and can not therefore signify the identity of the person, by which is understood the consciousness of the identity of one's own substance, as a thinking being, in all the changes of circumstances. In order to prove this, the mere analysis of the proposition, I think, would avail nothing: but different synthetical judgments would be required, which are based on the given intuition.

In my own consciousness, therefore, the identity of person is inevitably present. But this does not establish the rationalistic contention of personal identity. For the identity of my consciousness is merely a formal condition

of my thoughts and their coherence, and proves in no way the numerical identity of my subject, in which, in spite of the logical identity of the I, such a change may have passed as to make it impossible that it should retain its identity, though we may still attribute to it the same name of I, which in every other state, and even in the change of the subject, might yet retain the thought of the preceding and hand it over to the subsequent subject.\*

4. To say that I distinguish my own existence, as that of a thinking being, from other things outside me (one of them being my body) is likewise an analytical proposition; for *other* things are things which I conceive as *different* from myself. But, whether such a consciousness of myself is even possible without things outside me, whereby representations are given to me, and whether I could exist merely as a thinking being (without being a man), I do not know at all by that proposition.

Nothing therefore is gained by the analysis of the

\* Kant's note. An elastic ball, which impinges on another in a straight line, communicates to the second its whole motion, and therefore (if we only consider the places in space) its whole state. If then, in analogy with such bodies, we admit substances of which the one communicates to the other representations with consciousness, we could imagine a whole series of them, in which the first communicates its state and its consciousness to the second, the second its own state with that of the first substance to a third, and this again all these states of the former, together with its own, and a consciousness of them, to another. That last substance would be conscious of all the states of the previously changed substances, as of its own, because all of them had been transferred to it with the consciousness of them; but for all that it would not have been the same person in all those states.

consciousness of myself, in thought in general, towards the knowledge of myself as an object. The logical analysis of thinking in general is simply mistaken for a metaphysical determination of the object.

It would be a great, nay, even the only objection to the whole of our critique, if there were a possibility of proving *a priori* that all thinking beings are in themselves simple substances, that as such (as a consequence of the same argument) personality is inseparable from them, and that they are conscious of their existence as distinct from all matter. For we should thus have made a step beyond the world of sense and entered into the field of noumena, and after that no one could dare to question our right of advancing further, of settling in it, and, as each of us is favored by luck, taking possession of it. The proposition that every thinking being is, as such, a simple substance, is synthetical *a priori*, because, first, it goes beyond the concept on which it rests, and adds to act of thinking in general the *mode of existence*; and secondly, because it adds to that concept a predicate (simplicity) which can not be given in any experience. Hence synthetical propositions *a priori* would be not only admissible, as we maintained, in reference to objects of possible experience, and then only as principles of the possibility of that experience, but could be extended to things in general and to things in themselves, a result which would put an end to the whole of our critique, and bid us to leave everything as we found it. However, the danger is not so great, if only we look more closely into the matter.

In this process of rational psychology, there lurks a

paralogism, which may be represented by the following syllogism.

That which can not be conceived otherwise than as a subject, does not exist otherwise than as a subject, and is therefore a substance.

A thinking being, considered as such, can not be conceived otherwise than as a subject.

Therefore it exists also as such only, that is, as a substance.

In the major they speak of a being that can be thought in every respect, and therefore also as it may be given in intuition. In the minor, however, they speak of it only so far as it considers itself, as subject, with respect to the thinking and the unity of consciousness only, but not at the same time in respect to the intuition whereby this unity is given as an object of thinking. The conclusion, therefore, has been drawn by a sophism, and more especially by *sophisma figuræ dictionis*.\*

\* Kant's note. The thinking is taken in each of the two premises in a totally different meaning:—in the major, as it refers to an object in general (and therefore also as it may be given in intuition), but in the minor, only as it exists in its relation to self-consciousness, where no object is thought of, but where we only represent the relation to the self as the subject (as the form of thought). In the former, things are spoken of that can not be conceived otherwise than as subjects; while in the second we do not speak of *things*, but of the *thinking* (abstraction being made of all objects), wherein the *Ego* always serves as the subject of consciousness. The conclusion, therefore, ought not to be that I can not exist otherwise than as a subject, but only, that in thinking my existence I can use myself as the subject of a judgment only. This is an identical proposition, and teaches us nothing whatever as to the mode of our existence.

That we are perfectly right in thus resolving that famous argument into a paralogism, will be clearly seen in the light of the contention that the concept of a thing, which can exist by itself as a subject, and not as a mere predicate, carries as yet no objective reality, that is, that we can not know whether any object at all belongs to it, it being impossible for us to understand the possibility of such a mode of existence. It yields us therefore no knowledge at all. If such a concept is to indicate, under the name of a substance, an object that can be given, and thus become knowledge, it must be made to rest on a permanent intuition, as the indispensable condition of the objective reality of a concept, that is, as that by which alone the object can be given. In internal intuition, however, we have nothing permanent, for the *Ego* is only the consciousness of my thinking; and if we do not go beyond this thinking, we are without the necessary condition for applying the concept of substance, that is, of an independent subject, to the self, as a thinking being. Thus the simplicity of the substance entirely disappears with the objective reality of the concept, and is changed into a purely logical qualitative unity of self-consciousness in thinking in general, whether the subject be composite or not.

#### REFUTATION OF MENDELSSOHN'S PROOF OF THE PERMANENCE OF THE SOUL

This acute philosopher perceived very quickly how the ordinary argument that the soul (if it is once admitted to be a simple being) can not cease to exist by *decomposition*, was insufficient to prove its necessary continuance,

because it might cease to exist by simply *vanishing*. He therefore tried, in his *Phaedon*, to prove that the soul was not liable to that kind of perishing which would be a real annihilation, by endeavoring to show that a simple being can not cease to exist, because as it could not be diminished, and thus gradually lose something of its existence, and be changed, by little and little, into nothing (it having no parts, and therefore no plurality in itself), there could be no time between the one moment in which it exists, and the other in which it exists no longer; and this would be impossible.

He did not consider, however, that, though we might allow to the soul this simple nature, namely, that it contains nothing manifold, nothing by the side of each other, and therefore no extensive quantity, yet we could not deny to it, as little as to any other existing thing, intensive quantity, that is a degree of reality with respect to all its faculties, nay, to all which constitutes its existence. Such a degree of reality might diminish by an infinite number of smaller degrees, and thus the supposed substance (the thing, the permanence of which has not yet been established), might be changed into nothing, not indeed through decomposition, but through a gradual remission of its powers, or, if I may say so, through elangescence. For even consciousness has always a degree, which admits of being diminished,\* and therefore

\* Kant's note. Clearness is not, as the logicians maintain, the consciousness of a representation; for a certain degree of consciousness, though insufficient for recollection, must exist, even in many dark representations, because without all consciousness we should make no distinction in the connection of dark representations,

also the faculty of being conscious of oneself, as well as all other faculties.

The permanence of the soul, therefore, considered merely as an object of the internal sense, remains undemonstrated and undemonstrable, though its permanence in life, while the thinking being (as man) is at the same time to itself an object of the external senses, is clear by itself. But this does not satisfy the rational psychologist, who undertakes to prove, from mere concepts, the absolute permanence of the soul, even beyond this life.\*

which yet we are able to do with the *notae* of many concepts (such as those of right and justice, or as a musician does who in improvising strikes several keys at once). A representation is clear in which the consciousness is sufficient for a *consciousness* of its *difference* from the others. If the consciousness is sufficient for distinguishing, but not for a consciousness of the difference, the representation would still have to be called dark. There is, therefore, an infinite number of degrees of consciousness, down to its complete vanishing.

\* Kant's note. Those who, in establishing the possibility of a new theory, imagine that they have done enough if they can show triumphantly that no one can show a contradiction in their premises (as do those who believe that they understand the possibility of thinking, of which they have an example in the empirical intuitions of human life only, even after the cessation of life) can be greatly embarrassed by other possible theories, which are not a whit bolder than their own. Such is, for instance, the possibility of a division of *simple substance* into several, or of the coalition of several substances into one simple substance. For although divisibility presupposes a composite, it does not necessarily require a composite of substances, but of degrees only (of the manifold faculties) of one and the same substance. As, then, we may conceive all powers and faculties of the soul, even that of con-

If now we take the above propositions in *synthetical* connection, as indeed they must be taken, as valid for all thinking beings, in a system of rational psychology, and proceed from the category of relation, with the proposition, all thinking beings, as such, are substances, backwards through the series till the circle is completed, we sciousness, as diminished by one-half, the substance still remaining, we may also represent to ourselves, without any contradiction, that extinguished half as preserved, though not within it, but outside it, so that as the whole of what is real in it and has a degree, and therefore the whole existence of it, without any rest, has been halved, another separate substance would arise apart from it. For the plurality, which has been divided, existed before, though not as a plurality of substances yet of every reality as a quantum of existence in it, and the unity of substance was only a mode of existence, which by mere division has been changed into a plurality of substantiality. In the same manner several simple substances might coalesce again into one, nothing being lost thereby, but merely the plurality of substantiality; so that one substance would contain in itself the degree of reality of all former substances together. We might suppose that the simple substances which give us matter as a phenomenon (not indeed through a mechanical or chemical influence upon each other, but yet, it may be, by some unknown influence, of which the former is only a manifestation), produce by such a *dynamical* division of parental souls, taken as *intensive quantities*, what may be called child-souls, while they themselves repair their loss again through a coalition with new matter of the same kind. I am far from allowing the slightest value of validity to such vague speculations, and I hope that the principles of our Analytic have given a sufficient warning against using the categories (as, for instance, that of substance) for any but empirical purposes. But if the rationalist is bold enough to create an independent being out of the mere faculty of thought, without any permanent intuition, by which an object can be given, simply because the unity of apperception

arrive in the end at their existence, and this, according to that system, they are not only conscious of, independently of external things, but are supposed to be able to determine it even of themselves (with respect to that permanence which necessarily belongs to the character of substance). Hence it follows, that in this rationalistic system *idealism* is inevitable, at least problematical idealism, because, if the existence of external things is not required at all for the determination of one's own existence in time, their existence is really a gratuitous assumption of which no proof can ever be given.

If, on the contrary, we proceed *analytically*, taking the proposition, I think, which involves existence (according to the category of *modality*) as given, and analyze it, in order to find out whether, and how, the *Ego* determines its existence in space and time by it alone, the propositions of rational psychology would not start from the concept of a thinking being, in general, but from a reality, and the inference would consist in determining from the manner in which that reality is thought, after everything that is empirical in it has been removed, what belongs to a thinking being in general. This may be shown by the following table:

in thought does not allow him to explain it as something composite, instead of simply confessing that he cannot explain the possibility of a thinking nature, why should not a *materialist*, though he can as little appeal to experience in support of his theories, be entitled to use the same boldness, and use his principle for the opposite purpose, though retaining the formal unity on which his opponent relied?

I

I think,

2

as Subject,

3

as simple Subject,

4

as identical Subject, in every state of my thought.

As it has not been determined in the second proposition, whether I can exist and be conceived to exist as a subject only, and not also as a predicate of something else, the concept of subject is here taken as logical only, and it remains undetermined whether we are to understand by it a substance or not. In the third proposition, however, the absolute unity of apperception, the simple I, being the representation to which all connection or separation (which constitute thought) relate, assumes its own importance, although nothing is determined as yet with regard to the nature of the subject, or its subsistence. The apperception is something real, and it is only possible, if it is simple. In space, however, there is nothing real that is simple, for points (the only simple in space) are limits only, and not themselves something which, as a part, serves to constitute space. From this follows the impossibility of explaining the nature of myself, as merely a thinking subject, from the *materialistic* point of view. As, however, in the first proposition, my existence is taken for granted, for it is not said in it that every thinking being exists (this would predicate too much, namely, absolute necessity of them), but only, *I exist*, as thinking, the proposition itself is empirical, and contains only the

determinability of my existence, in reference to my representations in time. But as for that purpose again I require, first of all, something permanent, such as is not given to me at all in internal intuition, so far as I think myself, it is really impossible by that simple self-consciousness to determine the manner in which I exist, whether as a substance or as an accident. Thus, if *materialism* was inadequate to explain my existence, *spiritualism* is equally insufficient for that purpose, and the conclusion is, that, in no way whatsoever can we know anything of the nature of our soul, so far as the possibility of its separate existence is concerned.

And how indeed should it be possible by means of that unity of consciousness which we only know because it is indispensable to us for the very possibility of experience, to get beyond experience (our existence in life), and even to extend our knowledge to the nature of all thinking beings in general, by the empirical, but, with reference to every kind of intuition, undetermined proposition, I think.

There is, therefore, no rational psychology, as a *doctrine*, furnishing any addition to our self-knowledge, but only as a *discipline*, fixing unpassable limits to speculative reason in this field, partly to keep us from throwing ourselves into the arms of a soulless materialism, partly to warn us against losing ourselves in a vague, and, with regard to practical life, baseless spiritualism. It reminds us at the same time to look upon this refusal of our reason to give a satisfactory answer to such curious questions, which reach beyond the limits of this life, as a hint to turn our self-knowledge away from fruit-

less speculations to a fruitful practical use—a use which, though directed always to objects of experience only, derives its principle from a higher source, and so regulates our conduct, as if our destination reached far beyond experience, and therefore far beyond this life.

We see from all this, that rational psychology owes its origin to a mere misunderstanding. The unity of consciousness, on which the categories are founded, is mistaken for an intuition of the subject as object, and the category of substance applied to it. But that unity is only the unity in *thought*, by which alone no object is given, and to which, therefore, the category of substance, which always presupposes a given *intuition*, can not be applied, and therefore the subject can not be known. The subject of the categories, therefore, can not, by thinking them, receive a concept of itself, as an object of the categories; for in order to think the categories, it must presuppose its pure self-consciousness, the very thing that had to be explained. In like manner the subject, in which the representation of time has its original source, can not determine by it its own existence in time; and if the latter is impossible, the former, as a determination of one's self (as of a thinking being in general) by means of the categories, is equally so.\*

\* Kant's note. The I think is, as has been stated, an empirical proposition, and contains within itself the proposition, I exist. I can not say, however, everything which thinks exists; for in that case the property of thinking would make all beings which possess it necessary beings. Therefore, my existence can not, as Descartes supposed, be considered as derived from the proposition, I think (for in that case the major, everything that thinks exists, ought to have preceded), but is identical with it. It expresses an in-

Thus vanishes, as an idle dream, that knowledge which was to go beyond the limits of possible experience, and was connected no doubt with the highest interests of humanity, so far at least as speculative philosophy was to supply it. Yet no unimportant service has thus been rendered to reason by the severity of our criticism, in proving, at the same time, the impossibility of settling anything dogmatically with reference to an object of experience, beyond the limits of experience, and thus securing it against all possible assertions to the contrary. This can only be done in two ways, either by proving one's own proposition apodictically, or, if that does not succeed, by trying to discover the causes of that failure, definite empirical intuition, that is, a perception (and proves, therefore, that this proposition, asserting existence, is itself based on sensation, which belongs to sensibility), but it precedes experience, which is meant to determine the object of perception through the categories in respect to time. Existence, therefore, is here not yet a category, which never refers to an indefinitely given object, but only to one of which we have a concept, and of which we wish to know whether it exists also apart from that conception or no. An indefinite perception signifies here something real only that has been given merely for thinking in general, not therefore as a phenomenon, nor as a thing in itself (noumenon), but as *something* that really exists and is designated as such in the proposition, I think. For it must be observed, that if I have called the proposition, I think, an empirical proposition, I did not mean to say thereby, that the *ego* in that proposition is an empirical representation; it is rather purely intellectual, because it belongs to thought in general. Without some empirical representation, however, which supplies the matter for thought, the act, I think, would not take place, and the empirical is only the condition of the application or of the use of the pure intellectual faculty.

which, if they lie in the necessary limits of our reason, must force every opponent to submit to exactly the same law of renunciation with reference to any claims to dogmatical assertion.

Nothing is lost, however, by this with regard to the right, nay, the necessity of admitting a future life, according to the principles of practical, as connected with the speculative employment of reason. It is known besides, that a purely speculative proof has never been able to exercise any influence on the ordinary reason of men. It stands so entirely upon the point of a hair, that even the schools can only keep it from falling so long as they keep it constantly spinning round like a top, so that, even in their own eyes, it yields no permanent foundation upon which anything could be built. The proofs which are useful for the world at large retain their value undiminished, nay, they gain in clearness and natural power, by the surrender of those dogmatical pretensions, placing reason in its own peculiar domain, namely, the system of ends, which is, however, at the same time the system of nature; so that reason, as a practical faculty by itself, without being limited by the conditions of nature, becomes justified in extending the system of ends, and with it, our own existence, beyond the limits of experience and of life. According to the *analogy with the nature* of living beings in this world, in which reason must necessarily admit the principle that no organ, no faculty, no impulse, can be found, as being either superfluous or disproportionate to its use, and therefore purposeless, but that everything is adequate to its destination in life, man, who alone can contain in himself the

highest end of all this, would be the only creature excepted from it. For, his natural dispositions, not only so far as he uses them according to his talents and impulses, but more especially the moral law within him, go so far beyond all that is useful and advantageous in this life, that he is taught thereby, in the absence of all advantages, even of the shadowy hope of posthumous fame, to esteem the mere consciousness of righteousness beyond everything else, feeling an inner call, by his conduct in this world and a surrender of many advantages, to render himself fit to become the citizen of a better world, which exists in his idea only. This powerful and incontrovertible proof, accompanied by our constantly increasing recognition of a design pervading all that we see around us, and by a contemplation of the immensity of creation, and therefore also by the consciousness of an unlimited possibility in the extension of our knowledge, and a desire commensurate therewith, all this remains and always will remain, although we must surrender the hope of ever being able to understand, from the mere theoretical knowledge of ourselves, the necessary continuance of our existence.

#### CONCLUSION OF THE SOLUTION OF THE PSYCHOLOGICAL PARALOGISM

The dialectical illusion in rational psychology arises from our confounding an idea of reason (that of a pure intelligence) with the altogether indefinite concept of a thinking being in general. What we are doing is, that we conceive ourselves for the sake of a possible experience, taking no account, as yet, of any real experience, and

thence conclude that we are able to become conscious of our existence, independently of experience and of its empirical conditions. We are, therefore, confounding the possible *abstraction* of our own empirically determined existence with the imagined consciousness of a possible *separate* existence of our thinking self, and we bring ourselves to believe that we know the substantial within us as the transcendental subject, while what we have in our thoughts is only the unity of consciousness, on which, as on the mere form of knowledge, all determination is based.

The task of explaining the community of the soul with the body does not properly fall within the province of that psychology of which we are here speaking, because that psychology tries to prove the personality of the soul, apart also from that community (after death), being therefore *transcendent*, in the proper sense of that word, inasmuch as, though dealing with an object of experience, it deals with it only so far as it has ceased to be an object of experience. According to our doctrine, however, a sufficient answer might be returned to that question also. The difficulty of the task consists, as is well known, in the assumed heterogeneousness of the object of the internal sense (the soul), and the objects of the external senses, the formal condition of the intuition with regard to the former being time only, with regard to the latter, time and space. If we consider, however, that both kinds of objects thus differ from each other, not internally, but so far only as the one *appears* externally to the other, and that possibly what is at the bottom of phenomenal matter, as a thing in itself, may not be so heterogeneous after all

as we imagine, that difficulty vanishes, and there remains that one difficulty only, how a community of substances is possible at all; a difficulty which it is not the business of psychology to solve, and which, as the reader will easily understand, after what has been said in the Analytic of fundamental powers and faculties, lies undoubtedly beyond the limits of all human knowledge.

#### GENERAL NOTE ON THE TRANSITION FROM RATIONAL PSYCHOLOGY TO COSMOLOGY

The proposition, I think, or, I exist thinking, is an empirical proposition. Such a proposition is based on an empirical intuition, and its object is phenomenal: so that it might seem as if, according to our theory, the soul was changed altogether, even in thinking, into something phenomenal, and our consciousness itself, as merely phenomenal, would thus indeed refer to nothing.

Thinking, taken by itself, is a logical function only, and therefore pure spontaneity, in connecting the manifold of a merely possible intuition. It does not represent the subject of consciousness, as phenomenal, for the simple reason, that it takes no account whatsoever of the manner of intuition, whether it be sensuous or intellectual. I do not thereby represent myself to myself, either as I am, or as I appear to myself, but I only conceive of myself, as of any other object, without taking account of the manner of intuition. If thereby I represent myself as the *subject* of my thoughts, or as the *ground* of thinking, these modes of representation are not the categories of substance or cause, because these are functions of thought (judgment) as applied already

to our sensuous intuition, such sensuous intuition being necessary, if I wish to know myself. But I only wish to become conscious of myself as thinking, and as I take no account of what my own self may be as a phenomenon, it is quite possible that it might be a phenomenon only to me, who thinks, but not to me, so far as I am thinking. In the consciousness of myself in mere thinking I am the *substance itself*, but of that substance nothing is thus given me for thinking.

The proposition, I think, if it means, *I exist* thinking, is not merely logical function, but determines the subject (which then is at the same time object) with reference to its existence, and is impossible without the internal sense, the intuition of which always supplies the object, not as a thing in itself, but as phenomenal only. Here, therefore, we have no longer mere spontaneity of thinking, but also receptivity of intuition, that is, the thinking of myself applied to the empirical intuition of the same subject. In that empirical intuition the thinking self would have to look for the conditions under which its logical functions can be employed as categories of substance, cause, etc., in order not only to distinguish itself as an object by itself, through the *Ego*, but to determine the mode of its existence also, that is, to know itself as a noumenon. This, as we know, is impossible, because the internal empirical intuition is sensuous, and supplies us with phenomenal *data* only, which furnish nothing to the object of the pure *consciousness* for the knowledge of its own separate existence, but can serve the purpose of experience only.

Supposing, however, that we should hereafter discover,

not indeed in experience, but in certain (not only logical rules, but) *a priori* established laws of pure reason, concerning our existence, some ground for admitting ourselves, entirely *a priori*, as determining and ruling our own *existence*, there would then be a spontaneity by which our reality would be determinable without the conditions of empirical intuition, and we should then perceive that in the consciousness of our existing there is contained *a priori* something which may serve to determine with respect to some inner faculty, our existence, which otherwise can be determined sensuously only with reference to an intelligible, though, of course, an ideal world only.

This, however, would not in the least benefit the attempts of rational psychology. For though through that wonderful faculty, which becomes first revealed to myself by the consciousness of a moral law, I should have a principle, purely intellectual, for a determination of my existence, what would be its determining predicates? No other but those which must be given to me in sensuous intuition; and I should therefore find myself again in the same situation where I was before in rational psychology, requiring sensuous intuitions in order to give significance to the concepts of my understanding, such as substance, cause, etc., by which alone I can gain a knowledge of myself; and these intuitions can never carry me beyond the field of experience. Nevertheless, for practical purposes, which always concern objects of experience, I should be justified in applying these concepts, in analogy with their theoretical employment, to liberty also and to the subject of liberty, by taking them

only as logical functions of subject and predicate, of cause and effect. According to them, acts or effects, as following those (moral) laws, would be so determined that they may together with the laws of nature be explained in accordance with the categories of substance and cause; though arising in reality from a totally different principle. All this is only meant to prevent a misunderstanding to which our doctrine, which represents self-intuition as purely phenomenal, might easily be exposed.

The Paralogisms of Rational Psychology are so clearly stated by Kant that a résumé here is unnecessary. They constitute one of the most important parts of the Critique since they throw much light on the Deduction of the Categories and the Principles of the Pure Understanding. They also supplement those sections in so far that there the meaning of the transcendental unity of apperception was not so clearly stated. The Paralogisms bring out more clearly than does his Refutation of Idealism, Kant's general attitude.

The sections just considered clearly show that Kant believes the transcendental unity of apperception to be merely logical. He insists that there is no consciousness of self without external perceptions. This makes it impossible to admit a substantial self which precedes experience, and which renders experience possible. At the beginning of the Critique, it is true, Kant seemed to hold such a substantial view of the self. But a substantial view can not do justice to the organic nature of experience; and this organic inter-dependence is strongly

emphasized later in Kant, and is one of the most valuable results of the Critique. Hume, like the later Kant, opposed the same substantial view of the self, but his atomic view of experience prevented him from making a satisfactory solution of the problem.

Another phase of the significance of the Paralogisms is indicated when Kant holds that the reality which lies at the basis of internal intuition as well as of external phenomena, can not be known to be either matter or thinking being in itself; but that it is merely a basis of phenomena, unknown to us, which gives rise to the empirical experience of both. Of course, as to the ultimate basis of all phenomenal reality, we can not know at all what it is, and idealism and materialism seem equally unsatisfactory.

It is obvious that for Kant the unity of the pure *ego* as the highest principle of all knowledge represents merely an ideal. Kant is not referring to any *actual* transcendental *ego* either human or divine. The transcendental *ego* represents, in his system, no more than the logical correlative of a completely unified world. Consciousness in general, furthermore, is not a universal consciousness. These terms are valuable as principles of explanation but theoretical knowledge is unable to prove that they exist as actual facts.\*

Furthermore, the Paralogisms emphasize the impossibility of applying the doctrine of the substantiality of the self in an argument for the immortality of the soul.

\* Cf. pp. 215 ff. Andrew Seth, Hegelianism and Personality, pp. 27 ff. J. E. Creighton, Philosophical Review, Vol. VI, No. 2, pp. 162-69.

For since self-consciousness is merely a logical relation, is merely a functional unity involved in the forms of knowledge,—the categories,—it is the emptiest of all conceptions, and so in no wise enables us to assert immortality.

### THE ANTINOMY OF PURE REASON

As the paralogisms of pure reason form the foundation for a dialectical psychology, the antinomy of pure reason will place before our eyes the transcendental principles of a pretended pure (rational) cosmology, not in order to show that it is valid and can be accepted, but, as may be guessed from the very name of the antinomy of reason, in order to expose it as an idea surrounded by deceptive and false appearances, and utterly irreconcilable with phenomena.

A dialectical proposition of pure reason must have this characteristic to distinguish it from all purely sophistical propositions, *first*, that it does not refer to a gratuitous question, but to one which human reason in its natural progress must necessarily encounter, and, *secondly*, that it, as well as its opposite, carries with itself not a merely artificial illusion, which when once seen through disappears, but a natural and inevitable illusion, which, even when it deceives us no longer, always remains, and though rendered harmless, can not be annihilated.

This dialectical doctrine will not refer to the unity of the understanding in concepts of experience, but to the unity of reason in mere ideas, the condition of which, as it is meant to agree, as a synthesis according to rules, with the understanding, and yet at the same time, as the

absolute unity of that synthesis, with reason, must either, if it is adequate to the unity of reason, be too great for the understanding, or, if adequate to the understanding, too small for reason. Hence a conflict must arise, which can not be avoided, do what we will.

#### FIRST ANTINOMY

##### *Thesis*

The world has a beginning in time, and  
is limited also with regard to space.

##### *Proof*

For if we assumed that the world had no beginning in time, then an eternity must have elapsed up to every given point of time, and therefore an infinite series of successive states of things must have passed in the world. The infinity of a series, however, consists in this, that it never can be completed by means of a successive synthesis. Hence an infinite past series of worlds is impossible, and the beginning of the world a necessary condition of its existence. This was what had to be proved first.

With regard to the second, let us assume again the opposite. In that case the world would be given as an infinite whole of co-existing things. Now we can not conceive in any way the extension of a quantum, which is not given within certain limits to every intuition, except through the synthesis of its parts, nor the totality of such a quantum in any way, except through a completed synthesis, or by the repeated addition of unity to itself.

In order therefore to conceive the world, which fills all space, as a whole, the successive synthesis of the parts of an infinite world would have to be looked upon as completed; that is, an infinite time would have to be looked upon as elapsed, during the enumeration of all co-existing things. This is impossible. Hence an infinite aggregate of real things can not be regarded as a given whole, nor, therefore, as given at the same time. Hence it follows that the world is not infinite, as regards extension in space, but enclosed in limits. This was the second that had to be proved.

### *Antithesis*

The world has no beginning and no limits  
in space, but is infinite, in respect both  
to time and space.

### *Proof*

For let us assume that it has a beginning. Then, as beginning is an existence which is preceded by a time in which the thing is not, it would follow that antecedently there was a time in which the world was not, that is, an empty time. In an empty time, however, it is impossible that anything should take its beginning, because of such a time no part possesses any condition as to existence rather than non-existence, which condition could distinguish that part from any other (whether produced by itself or through another cause). Hence, though many a series of things may take its beginning in the world, the world itself can have no beginning, and in reference to time past is infinite.

With regard to the second, let us assume again the opposite, namely, that the world is finite and limited in space. In that case the world would exist in an empty space without limits. We should therefore have not only a relation of things *in space*, but also of things *to space*. As however the world is an absolute whole, outside of which no object of intuition, and therefore no correlate of the world can be found, the relation of the world to empty space would be a relation to *no object*. Such a relation, and with it the limitation of the world by empty space, is nothing, and therefore the world is not limited with regard to space, that is, it is infinite in extension.

#### SECOND ANTINOMY

##### *Thesis*

Every compound substance in the world consists of simple parts, and nothing exists anywhere but the simple, or what is composed of it.

##### *Proof*

For let us assume that compound substances did not consist of simple parts, then, if all composition is removed in thought, there would be no compound part, and (as no simple parts are admitted) no simple part either, that is, there would remain nothing, and there would therefore be no substance at all. Either, therefore, it is impossible to remove all composition in thought, or, after its removal, there must remain something that exists without composition, that is the simple. In the former case the

compound could not itself consist of substances (because with them composition is only an accidental relation of substances, which substances, as permanent beings must subsist without it). As this contradicts the supposition, there remains only the second view, namely, that the substantial compounds in the world consist of simple parts.

It follows as an immediate consequence that all the things in the world are simple beings, that their composition is only an external condition, and that, though we are unable to remove these elementary substances from their state of composition and isolate them, reason must conceive them as the first subjects of all composition, and therefore, antecedently to it, as simple beings.

### *Antithesis*

No compound thing in the world consists of simple parts, and there exists nowhere in the world anything simple.

### *Proof*

Assume that a compound thing, a substance, consists of simple parts. Then as all external relation, and therefore all composition of substances also, is possible in space only, it follows that space must consist of as many parts as the parts of the compound that occupies the space. Space, however, does not consist of simple parts, but of spaces. Every part of a compound, therefore, must occupy a space. Now the absolutely primary parts of every compound are simple. It follows therefore that

the simple occupies a space. But as everything real, which occupies a space, contains a manifold, the parts of which are by the side of each other, and which therefore is compounded, and, as a real compound, compounded not of accidents (for these could not exist by the side of each other, without a substance), but of substances, it would follow that the simple is a substantial compound, which is self-contradictory.

The second proposition of the antithesis, that there exists nowhere in the world anything simple, is not intended to mean more than that the existence of the absolutely simple can not be proved from any experience or perception, whether external or internal, and that the absolutely simple is a mere idea, the objective reality of which can never be shown in any possible experience, so that in the explanation of phenomena it is without any application or object. For, if we assumed that an object of this transcendental idea might be found in experience, the empirical intuition of some one object would have to be such as to contain absolutely nothing manifold by the side of each other, and combined to a unity. But as, from our not being conscious of such a manifold, we can not form any valid conclusion as to the entire impossibility of it in any objective intuition, and as without this no absolute simplicity can be established, it follows that such simplicity can not be inferred from any perception whatsoever. As, therefore, an absolutely simple object can never be given in any possible experience, while the world of sense must be looked upon as the sum total of all possible experience, it follows that nothing simple exists in it.

This second part of the antithesis goes far beyond the first, which only banished the simple from the intuition of the composite, while the second drives it out of the whole of nature. Hence we could not attempt to prove it out of the concept of any given object of external intuition (of the compound), but from its relation to a possible experience in general.

### THIRD ANTINOMY

#### *Thesis*

Causality, according to the laws of nature, is not the only causality from which all the phenomena of the world can be deduced. In order to account for these phenomena it is necessary also to admit another causality, that of freedom.

#### *Proof*

Let us assume that there is no other causality but that according to the laws of nature. In that case everything that *takes place*, presupposes an anterior state, on which it follows inevitably according to a rule. But that anterior state must itself be something which has taken place (which has come to be in time, and did not exist before), because, if it had always existed, its effect too would not have only just arisen, but have existed always. The causality, therefore, of a cause, through which something takes place, is itself an *event*, which again, according to the law of nature, presupposes an anterior state and its causality, and this again an anterior state, and so on.

If, therefore, everything takes place according to mere laws of nature, there will always be a secondary only, but never a primary beginning, and therefore no completeness of the series, on the side of successive causes. But the law of nature consists in this, that nothing takes place without a cause sufficiently determined *a priori*. Therefore the proposition, that all causality is possible according to the laws of nature only, contradicts itself, if taken in unlimited generality, and it is impossible, therefore, to admit that causality as the only one.

We must therefore admit another causality, through which something takes place, without its cause being further determined according to necessary laws by a preceding cause, that is, an *absolute spontaneity* of causes, by which a series of phenomena, proceeding according to natural laws, begins by itself; we must consequently admit transcendental freedom, without which, even in the course of nature, the series of phenomena on the side of causes, can never be perfect.

### *Antithesis*

There is no freedom, but everything  
in the world takes place entirely  
according to the laws of nature.

### *Proof*

If we admit that there is *freedom*, in the transcendental sense, as a particular kind of causality, according to which the events in the world could take place, that is a faculty of absolutely originating a state, and with it a

series of consequences, it would follow that not only a series would have its absolute beginning through this spontaneity, but the determination of that spontaneity itself to produce the series, that is, the causality, would have an absolute beginning, nothing preceding it by which this act is determined according to permanent laws. Every beginning of an act, however, presupposes a state in which the cause is not yet active, and a dynamically primary beginning of an act presupposes a state which has no causal connection with the preceding state of that cause, that is, in no wise follows from it. Transcendental freedom is therefore opposed to the law of causality, and represents such a connection of successive states of effective causes, that no unity of experience is possible with it. It is therefore an empty fiction of the mind, and not to be met with in any experience.

We have, therefore, nothing but *nature*, in which we must try to find the connection and order of cosmical events. Freedom (independence) from the laws of nature is no doubt a *deliverance* from restraint, but also from the *guidance* of all rules. For we can not say that, instead of the laws of nature, laws of freedom may enter into the causality of the course of the world, because, if determined by laws, it would not be freedom, but nothing else but nature. Nature, therefore, and transcendental freedom differ from each other like legality and lawlessness. The former, no doubt, imposes upon the understanding the difficult task of looking higher and higher for the origin of events in the series of causes, because their causality is always conditioned. In return for this, however, it promises a complete and well-ordered

unity of experience; while, on the other side, the fiction of freedom promises, no doubt, to the inquiring mind, rest in the chain of causes, leading him up to an unconditioned causality, which begins to act by itself, but which, as it is blind itself, tears the thread of rules by which alone a complete and coherent experience is possible.

#### FOURTH ANTINOMY

##### *Thesis*

There exists an absolutely necessary being belonging to the world, either as a part or as a cause of it.

##### *Proof*

The world of sense, as the sum total of all phenomena, contains a series of changes without which even the representation of a series of time, which forms the condition of the possibility of the world of sense, would not be given us. But every change has its condition which precedes it in time, and renders it necessary. Now, everything that is given as conditional presupposes, with regard to its existence, a complete series of conditions, leading up to that which is entirely unconditioned, and alone absolutely necessary. Something absolutely necessary therefore must exist, if there exists a change as its consequence. And this absolutely necessary belongs itself to the world of sense. For if we supposed that it existed outside that world, then the series of changes in the world would derive its origin from it, while the nec-

essary cause itself would not belong to the world of sense. But this is impossible. For as the beginning of a temporal series can be determined only by that which precedes it in time, it follows that the highest condition of the beginning of a series of changes must exist in the time when that series was not yet (because the beginning is an existence, preceded by a time in which the thing which begins was not yet). Hence the causality of the necessary cause of changes and that cause itself belong to time and therefore to phenomena (in which alone time, as their form, is possible), and it can not therefore be conceived as separated from the world of sense, as the sum total of all phenomena. It follows, therefore, that something absolutely necessary is contained in the world, whether it be the whole cosmical series itself, or only a part of it.

### *Antithesis*

There nowhere exists an absolutely necessary being, either within or without the world, as the cause of it.

### *Proof*

If we supposed that the world itself is a necessary being, or that a necessary being exists in it, there would then be in the series of changes either a beginning, unconditionally necessary, and therefore without a cause, which contradicts the dynamical law of the determination of all phenomena in time; or the series itself would be without any beginning, and though contingent and

conditioned in all its parts, yet entirely necessary and unconditioned as a whole. This would be self-contradictory, because the existence of a multitude can not be necessary, if no single part of it possesses necessary existence.

If we supposed, on the contrary, that there exists an absolutely necessary cause of the world, outside the world, then that cause, as the highest member in *the series of causes* of cosmical changes, would begin the existence of the latter and their series. In that case, however, that cause would have to begin to act, and its causality would belong to time, and therefore to the sum total of phenomena. It would belong to the world, and would therefore not be outside the world, which is contrary to our supposition. Therefore, neither in the world, nor outside the world (yet in causal connection with it), does there exist anywhere an absolutely necessary being.

Rational cosmology deals with the idea of the world of phenomena determined in space and time. But since phenomena are determined under space and time relations, that determination brings out their dependence upon each other, but at the same time prevents a complete determination of phenomena as a whole.

We are thus led into a series of dilemmas, in which starting with phenomena we try to get the complete conditions which make them possible. This is done by trying to reach either an unconditioned beginning or else a complete series which is infinite. Kant holds that in the latter situation, we get an infinite series, but one that is only *potentially* infinite in so far that it is reached by a regress which is never completed. In the former case, the first in space, is a world-limit, a first in time, a world-

beginning; or again, in terms of divisibility, we get to a simple; or in a series of causes to an originally free activity; or so far as existence is concerned, to a necessary being.

For the sake of clearness it may be desirable to summarize the antinomies in the light of the foregoing statement.

In the first antinomy let us start with the first alternative: the world is limited in time and space. We must immediately ask what is the limit, that is, the boundary. This must be filled time and space, for if it were empty time or space, the world would be bounded by nothing. If, on the other hand, it is bounded by filled space and time, it is bounded by reality, and then what has been taken as the whole world, turns out to be only a portion of the world. Let us suppose the other alternative and say that the world is not limited in time or space, that is, it has no beginning in time and no limits in space. Then it follows that there must have been an infinity of elapsed time prior to the present moment, and an infinity of spaces from the space here, and so we again end in confusion. In other words, his proof of each of the alternatives consists in showing the impossibility of the opposite.

The second antinomy is the dilemma reached in the consideration of the divisibility of matter. Its thesis holds that every composite substance consists of simple parts. Composition always may be annihilated without annihilating the substances so compounded. To say that the opposite of the thesis is true, namely, that there

is infinite divisibility, that is, composition which does not consist of simple parts, is to deny any substantiality beneath their accidental combinations, and so is an absurdity. Therefore, the opposite of the thesis is false, and the thesis is proved. The other alternative is that in the world there is no simple substance, and its proof again consists in showing the impossibility of the opposite. Space is never composed of simple parts, for those apparently simple spaces are always again composed of spaces. What is true of the infinite divisibility of space is true of objects in space. The paralogisms also showed that the *Ego* as a simple object is impossible. Therefore, in the world there is no simple substance.

In the third antinomy, the dilemma concerns the finiteness or infinity of the causal series. The first alternative asserts that in addition to, and in order to explain the orderly sequence of phenomena in nature, there is a causality of freedom. The principle of causation demands that every phenomenon in nature must have its antecedent change which produces it, and so on. But each member of the series is not the real cause of the succeeding member, and so there is no real causality in the whole series unless we assert a spontaneity, a causality of freedom, that is, without the causality of freedom, the law of causality is contradicted. The other alternative asserts that everything happens entirely according to the laws of nature, and there is no causality of freedom. For, if a free cause exists at the beginning of the series, unless we contradict the law of causality, this free cause must itself be the result of a prior cause, and that, in turn, of another and prior cause, and so on *ad infinitum*.

In other words, if there were a free cause, it would itself be uncaused and so contradict the law of causality.

In the fourth antinomy, the dilemma concerns the relation of contingency to necessity, and is nothing more than the logical continuation of the third antinomy. The first alternative of the dilemma, and the thesis of this antinomy, asserts the existence either in the world or beyond it, of a necessary being, an absolute cause of the universe. The proof for it is practically a repetition of the proof for the thesis of the third antinomy, with this modification, that for the causality of freedom is substituted its logical consequence—an absolutely necessary being. The other alternative asserts that there nowhere exists an absolutely necessary being, either within or without the world, as a cause of it. A necessary being as in the world, and a part of it, can be taken in two ways, as existing at the beginning of the world, or, as itself constituting the series of phenomena as a whole. Taking the former, since every beginning is a moment in time, an absolute beginning would be one that is without a preceding moment. But since time admits of no limits, this is inconceivable. Consequently this possibility of conceiving the necessary being at the beginning of the world falls. The other possibility, namely, that the necessary being constitutes and is constituted by the whole series of phenomena is no better. For no summation of relative and contingent phenomena will ever be an absolute and necessary being. The conclusion is then that there is no necessary being *in* the world. But may such necessary being be *beyond* the world? If it is, it exists outside time and space. But it is supposed to be

the source and beginning of things, and as all beginning is in a moment of time, this relation is also impossible, for by hypothesis it is outside of time.

Kant, in his solution of the antinomies, distinguishes between the first two, or mathematical, antinomies, and the third and fourth, or dynamical antinomies. The mathematical antinomies, by reason of their dealing with the composition and division of quantitative magnitudes, are stated so that the conditions and the conditioned are homogeneous, whereas in the dynamical antinomies, condition and conditioned need not be and are not homogeneous.

In the mathematical antinomies the thesis and antithesis are both *false* because they both rest on the false assumption that the world, as a body of phenomena which is complete, is given; whereas, as a matter of fact, the totality is merely demanded by reason, but can not be given in experience. Our knowledge does not give us the world in itself, but merely an incomplete phenomenal representation based upon an empirical regress which can never be completed. Consequently we are not justified in saying that the world as a whole is either finite or infinite, or, that either it is composed of simple parts, or is infinitely divisible.

In the dynamical antinomies we face a different situation, namely, that both thesis and antithesis in each antinomy may be *true*. For the thesis may be *true* if it refers to things in themselves, while the antithesis may be *true* if it refers to phenomena. Taking the antithesis first, we can say that in the world of nature, that is, phenomena, there is no break in the causal series, and

no necessity or place for either a free cause or a necessary being. There is now no conflict if we say that on the other hand in the world of things in themselves, beyond the world of sense, there *may be* that free, necessary cause, which the *reason demands* as ground of the phenomenal regress. In this way, Kant believes, the way is opened for faith, for, had such a solution of these antinomies been impossible, either experiential knowledge on the one side, or the basis of ethics and religion on the other, would have been impossible.

Kant believes that the third of the antinomies seems particularly significant on this account, for in its solution one can point out that the antithesis does at least not disprove the possibility of the thesis. In other words, that while the possibility of freedom can not be proved, yet it can be proved that freedom is not impossible.

The law of nature, that everything which happens has a cause,—that the causality of that cause, that is, its *activity* (as it is anterior in time, and, with regard to an effect which has *arisen*, can not itself have always existed, but must have *happened* at some time), must have its cause among the phenomena by which it is determined, and that therefore all events in the order of nature are empirically determined. This law, through which alone phenomena become *nature* and objects of experience, is a law of the understanding, which can on no account be surrendered, and from which no single phenomenon can be exempted; because in doing this we should place it outside all possible experience, separate from all objects of possible experience, and change it into a mere fiction of the mind or a cobweb of the brain.

We require the principle of the causality of phenomena among themselves, in order to be able to look for and to produce natural conditions, that is, phenomenal causes of natural events. If this is admitted and not weakened by any exceptions, the understanding, which in its empirical employment recognizes in all events nothing but nature, and is quite justified in doing so, has really all that it can demand, and the explanations of physical phenomena may proceed without let or hindrance. The understanding would not be wronged in the least, if we assumed, though it be a mere fiction, that some among the natural causes have a faculty which is intelligible only, and whose determination to activity does not rest on empirical conditions, but on mere grounds of the intellect, if only the *phenomenal activity* of that cause is in accordance with all the laws of empirical causality.

Our problem is then whether freedom is really contradictory to natural necessity.

Man, so far as he is considered as a phenomenal being, is subject to the laws of nature, the same as other objects of nature. In lifeless or merely animal nature there is no ground for taking exception to complete determination by natural causes. But man is not merely an object, he is a being through the principles of whose mind, objects become possible for him. Furthermore, the fact of his being the possessor of moral obligation shows that his nature includes more than the merely theoretical principles of phenomenal possibility, and that he has also noumenal significance. The *ought* expresses a kind of necessity and connection with causes,

which we do not find elsewhere in the whole of nature. The understanding can know in nature only what is present, past, or future. If we look at the course of nature as a causally connected whole, the *ought* has no significance because everything is necessarily determined by mechanical causation.

A man's actions as empirical phenomena are necessarily determined as such. But if we consider the same actions with reference to reason, not speculative reason, but the practical reason, it is conceivable that there may be a rule and order entirely different from the order of nature. And we *may* find that the ideas of reason have really proved their causality with reference to human actions as phenomena, and that these actions have taken place, not because they were determined by empirical causes, but by the causes of reason. The causality of reason in its intelligible character does *not arise* or begin at a certain time in order to produce an effect; for in that case it would be subject to the natural law of phenomena, and its causality would be nature and not freedom. What we could say is that reason is a faculty *through which* the sensuous condition of an empirical series first begins. For the condition that lies in reason would not be sensuous and therefore would itself not begin. Thus we would get what we missed in all empirical series, namely, that the *condition* of a successive series of events should itself be empirically unconditioned.

Reason would be the constant condition of all free actions by which man takes his place in the phenomenal world. Every one of them would be determined beforehand in his empirical character, before it becomes actual.

With regard to the intelligible character, however, of which the empirical is only a sensuous schema, there would be neither *before nor after*; and every action, without regard to the temporal relation which connects it with other phenomena, would be the immediate effect of the intelligible character of pure reason.

While the preceding argument does not prove the existence of a causality of freedom, it shows us that freedom is not necessarily precluded by natural causality. Kant has constantly insisted that natural causality holds good of phenomena only, and not of things in themselves. Therefore, if considerations of a moral or religious character furnish practical reasons for belief in freedom, rational faith finds no valid grounds militating against such belief. To change the natural course of events in accord with moral ideals, is the imperative which Kant finds present in us all. It is man's duty to rise superior to natural impulses, and so overcome natural necessity. But an *ought* implies that the action is possible and this in turn implies freedom. An adequate treatment of this problem is not attempted here where the sole purpose is to show that freedom is not unthinkable. In this manner, Kant has prepared the way for his doctrine of morals.

### THE IDEAL OF PURE REASON

In the analytic the problem was to find pure concepts of the understanding whereby the material of phenomenal knowledge could be unified and such knowledge made possible. In the dialectic the problem has been to find a unity of the categories in terms of ideas of reason.

These ideas contain a certain completeness unattainable in any possible empirical knowledge, and reason aims in them at a systematical unity only, to which the empirically possible unity is to approximate, without ever fully reaching it. Still further removed from objective reality is what Kant calls the *Ideal*, by which he means the idea, not only *in concreto*, but in *individuo*, that is, an individual thing determinable or even determined by the idea alone. What is to us an ideal, was in Plato's language an Idea of a divine mind, an individual object present to its pure intuition, the most perfect of every kind of possible being, and the archetype of all phenomenal copies. These ideals, though they cannot claim objective reality (existence), are not therefore to be considered as mere chimeras, but supply reason with an indispensable standard, because it requires the concept of that which is perfect of its kind, in order to estimate and measure by it the degree and the number of the defects in the imperfect. In its ideal, reason aims at a perfect determination, according to rules *a priori*, and it conceives an object throughout determinable according to principles, though without sufficient conditions of experience, so that the concept itself is transcendent. Such an ideal, in short, is the idea of God.

The ideas of reason have been found in the dialectic to lead to a series of illusory syllogisms—in the rational psychology, a categorical syllogism; in the rational cosmology, an hypothetical syllogism, and in the rational theology, a disjunctive syllogism. The way in which the relation of the rational theology to the disjunctive syllogism is worked out, will appear in what follows.

Everything is subject, in its possibility, to the principle of complete determination, according to which one of all the possible predicates of things, as compared with their opposites, must be applicable to it. This does not rest only on the principle of contradiction, for it regards everything, not only in relation to two contradictory predicates, but in relation to the *whole possibility*, that is, to the whole of all predicates of things, and, presupposing these as a condition *a priori*, it represents everything as deriving its own possibility from the share which it possesses in that whole possibility. This principle of complete determination relates therefore to the content, and not only to the logical form. It is the principle of the synthesis of all predicates which are meant to form the complete concept of a thing, and not the principle of analytical representation only, by means of one of two contradictory predicates; and it contains a transcendental presupposition, namely, that of the material for all possibility which is supposed to contain *a priori* the data for the particular possibility of everything.

Now although this idea of the *sum total of all possibility*, so far as it forms the condition of the complete determination of everything, is itself still undetermined with regard to its predicates, and is conceived by us merely as a sum total of all possible predicates, we find nevertheless on closer examination that this idea, as a fundamental concept, excludes a number of predicates which, being derivative, are given by others, or can not stand one by the side of the other, and that it is raised to a completely *a priori* determined concept, thus becoming the concept of an individual object which is completely

determined by the mere idea, and must therefore be called an ideal of pure reason.

By this complete possession of all reality we represent the concept of a *thing in itself* as completely determined, and the concept of an *ens realissimum* is the concept of individual being, because of all possible opposite predicates one, namely, that which absolutely belongs to being, is found in its determination. It is therefore a transcendental *ideal* which forms the foundation of the complete determination which is necessary for all that exists, and which constitutes at the same time the highest and complete condition of its possibility, to which all thought of objects, with regard to their content, must be traced back. It is at the same time the only true ideal of which human reason is capable, because it is in this case alone that a concept of a thing, which in itself is general, is completely determined by itself, and recognized as the representation of an individual.

The logical determination of a concept by reason is based upon a disjunctive syllogism in which the major contains a logical division (the division of the sphere of a general concept), while the minor limits that sphere to a certain part, and the conclusion determines the concept by that part. The general concept of a reality in general can not be divided *a priori*, because without experience we know no definite kinds of reality contained under that genus. Hence the transcendental major of the complete determination of all things is nothing but a representation of the sum total of all reality, and not only a concept which comprehends all predicates, according to their transcendental content, *under itself*, but *within itself*;

and the complete determination of everything depends on the limitation of this total of reality, of which some part is ascribed to the thing, while the rest is excluded from it, a procedure which agrees with the *aut aut* of a disjunctive major, and with the determination of the object through one of the members of that division in the minor. Thus the procedure of reason by which the transcendental ideal becomes the basis of the determination of all possible things, is analogous to that which reason follows in disjunctive syllogisms, a proposition on which I tried to base the systematical division of all transcendental ideas, and according to which they are produced, as corresponding to the three kinds of the syllogisms of reason.

The derivation of all other possibility from that original being can not, if we speak accurately, be considered as a *limitation* of its highest reality, and, as it were, a *division* of it—for in that case the original being would become to us a mere aggregate of derivative beings, which is impossible, though we represented it so in our first rough sketch. On the contrary, the highest reality would form the basis of the possibility of all things as a *cause*, and not as a *sum total*. The manifoldness of things would not depend on the limitation of the original being, but on its complete effect, and to this also would belong all our sensibility, together with all reality in phenomenal appearance, which could not, as an ingredient, belong to the idea of a supreme being.

If we follow up this idea of ours and hypostasize it, we shall be able to determine the original being by means of the concept of the highest reality as one, simple, all-

sufficient, eternal, etc., in one word, determine it in its unconditioned completeness through all predicaments. The concept of such a being is the concept of *God* in its transcendental sense, and thus, as Kant indicated above, the ideal of pure reason is the object of a transcendental *theology*.

#### CRITICISM OF THE ONTOLOGICAL PROOF FOR THE EXISTENCE OF GOD

The concept of an absolutely necessary being is a concept of pure reason, that is, a *mere idea*, the objective reality of which is not proved by the fact that it is required by reason. That idea does no more than point to a certain but unattainable completeness, and serves rather to limit the understanding, than to extend its sphere.

People, in all their talk concerning an absolutely necessary being, have tried not so much to understand whether and how a thing of that kind could even be conceived, as to prove its existence. It has not been made clear why the non-existence of such a being is inconceivable, and we are not sure whether any object corresponds to the concept unconditioned. Furthermore, the examples used to explain the concept have been taken from judgments only, not from things, and their existence. Now the unconditioned necessity of judgments is not the same thing as an absolute necessity of things. The proposition that a triangle has three angles, does not say that these angles exist, but only that if the triangle exists, it must have three angles. Nevertheless, this pure logical necessity has exerted so powerful an

illusion, that, after having formed of a thing a concept *a priori* so constituted that it seemed to include existence in its sphere, people thought they could conclude with certainty that, because existence necessarily belongs to the object of that concept, provided always that I accept the thing as given, its existence also must necessarily be accepted, and that the being therefore must itself be absolutely necessary, because its existence is implied in a concept, which is accepted voluntarily only, and always under the condition that I accept the object of it as given.

If in an identical judgment the predicate is rejected and the subject retained, there arises a contradiction. But if both subject and predicate are rejected, there is no contradiction. To accept a triangle and yet to reject its three angles is contradictory, but there is no contradiction in admitting the non-existence of the triangle and of its three angles. The same applies to the concept of an absolutely necessary being. Remove its existence, and you remove the thing itself with all its predicates, so that a contradiction becomes impossible. If you say, God is almighty, that is a necessary judgment, because almighty can not be removed, if you accept a deity. But if you say, God is not, then neither his almighty can, nor any other of his predicates is given; they are all, together with the subject, removed out of existence, and there is no contradiction.

The only way of evading the above conclusion would be to say that there are subjects which can not be removed. But this would be to assert the existence of absolutely necessary subjects, and that is the very thing to be proved. Kant holds it impossible to form any con-

cept of a thing which if removed together with its predicates will involve any contradiction. Despite all these arguments, however, it is asserted that there is one and only one concept in which the removal of its object would be self-contradictory, namely, the concept of the most real being. It is said that it possesses all reality, and one is no doubt justified in accepting such a being as *possible*.<sup>\*</sup> Now reality comprehends existence, and therefore existence is contained in the concept of a thing possible. If that thing is removed, the internal possibility of the thing would be removed, and this is self-contradictory.

Kant, on the other hand, asserts that by introducing into the concept of a thing, which you wish to think in its possibility only, the concept of existence, you have been guilty of a fallacy. You can draw out no more than you have yourself included in the concept, and this is mere tautology. All judgments concerning existence are synthetical propositions; hence we can not demonstrate the existence of God from the concept of God.

Existence is not a real predicate, or a concept of something that can be added to the concept of a thing. It is merely the admission of a thing, and of certain determina-

\* But Kant warns us that the absence of self-contradictoriness in a concept is far from proving the possibility of its object. A concept is always possible, if it is not self-contradictory. But it may nevertheless be an empty concept, unless the objective reality of the synthesis, by which the concept is generated, has been distinctly shown. This, however, must rest upon principles of possible experience, and not on the principle of contradiction. This is a warning against inferring at once from the logical possibility the possibility of real things.

tions in it. Logically, it is merely the copula of a judgment. The proposition, *God is almighty*, contains two concepts, each having its object, namely, God and almighty. The small word *is*, is not an additional predicate, but only serves to put the predicate *in relation* to the subject. If, then, I take the subject God with all its predicates, and say, *God is*, or there is a God, I add no predicate to the concept of God, but only put the subject with all its predicates, in relation to my concept, as its object. Both must contain exactly the same kind of thing, and nothing can have been added to the concept, which expresses possibility only, by my thinking its object as simply given and saying, *it is*. And thus the real does not contain more than the possible. A hundred real dollars do not contain a penny more than a hundred possible dollars.

If, then, I try to conceive a being, as the highest reality (without any defect), the question still remains, whether it exists or not. For though in my concept there may be wanting nothing of the possible real content of a thing in general, something is wanting in its relation to my whole state of thinking, namely, that the knowledge of that object should be possible *a posteriori* also, and here we perceive the cause of our difficulty.

Kant's criticism of the ontological argument calls attention to two fallacies. 1. Mere absence of contradiction proves no more than the logical possibility of a concept; it does not establish the real possibility of a thing. 2. It is impossible to derive the existence of a thing by analysis of a concept; all existential judgments are synthetical. Existence is not something included in

the concept of a thing, the existence of a thing can not be determined without experience.\*

#### CRITICISM OF THE COSMOLOGICAL PROOF FOR THE EXISTENCE OF GOD

The cosmological proof, which Leibniz calls also the proof *a contingentia mundi*, runs as follows: If there exists anything, there must exist an absolutely necessary being also. Now I, at least, exist; therefore there exists an absolutely necessary being. This proof begins with experience, and is not entirely *a priori*, or ontological; and, as the object of all possible experience is called the world, this proof is called the *cosmological proof*. The proof then goes on as follows: The necessary being can be determined in one way only, that is, by one only of all possible opposite predicates; it must therefore be determined completely by its own concept. Now, there is only one concept of a thing possible, which *a priori* completely determines it, namely, that of the *ens realissimum*. It follows, therefore, that the concept of the *ens realissimum* is the only one by which a necessary being can be thought, and therefore it is concluded that a highest being exists by necessity.

There are so many sophistical propositions in this cosmological argument, that it really seems as if speculative reason had spent all her dialectical skill in order to produce the greatest possible transcendental illusion. We see that there is here put forward an old argument disguised as a new one, in order to appeal to the agree-

\* The entire question of the validity of Kant's criticism of this argument hinges on the relation between thought and reality.

ment of two witnesses, one supplied by pure reason, the other by experience, while in reality there is only one, namely, the first, who changes his dress and voice in order to be taken for a second. In order to have a secure foundation, this proof takes its stand on experience, and pretends to be different from the ontological proof, which places its whole confidence in pure concepts *a priori* only. The cosmological proof, however, uses that experience only in order to make one step, namely, to the existence of a necessary being in general. What properties that being may have, can never be learnt from the empirical argument, and for that purpose reason takes leave of it altogether, and tries to find out, from among concepts only, what properties an absolutely necessary being ought to possess, that is, which among all possible things contains in itself the requisite conditions of absolute necessity. This requisite is believed by reason to exist in the concept of an *ens realissimum* only, and reason concludes at once that this must be the absolutely necessary being. In this conclusion it is simply assumed that the concept of a being of the highest reality is perfectly adequate to the concept of absolute necessity in existence; so that the latter might be concluded from the former. This is the same proposition as that maintained in the ontological argument, and is simply taken over into the cosmological proof, nay, made its foundation, although the intention was to avoid it. For it is clear that absolute necessity is an existence from mere concepts. If, then, I say that the concept of the *ens realissimum* is such a concept, and is the only concept adequate to necessary existence, I am bound to

admit that the latter may be deduced from the former. The whole conclusive strength of the so-called cosmological proof rests therefore in reality on the ontological proof from mere concepts, while the appeal to experience is quite superfluous, and, though it may lead us on to the concept of absolute necessity, it cannot demonstrate it with any definite object.

Another of the sophisms of the cosmological argument may now be shown. If the proposition is right, that every absolutely necessary being is, at the same time, the most real being (and this is the *nervus probandi* of the cosmological proof), it must like all affirmative judgments, be capable of conversion, at least *per accidens*. This would give us the proposition that some *entia realissima* are at the same time absolutely necessary beings. One *ens realissimum*, however, does not differ from any other on any point, and what applies to one, applies also to all. In this case, therefore, I may employ absolute conversion, and say, that every *ens realissimum* is a necessary being. As this proposition is determined by its concepts *a priori* only, it follows that the mere concept of the *ens realissimum* must carry with it its absolute necessity; and this, which was maintained by the ontological proof, and not recognized by the cosmological, forms really the foundation of the conclusions of the latter, though in a disguised form.

It may be allowable to *admit* the existence of a being entirely sufficient to serve as the cause of all possible effects, simply in order to assist reason in her search for unity of causes. But to go so far as to say that *such a being exists necessarily*, is no longer the modest language

of an admissible hypothesis, but the bold assurance of apodictic certainty; for the knowledge of that which is absolutely necessary must itself possess absolute necessity.

The whole problem of the transcendental ideal is this, either to find a concept compatible with absolute necessity, or to find the absolute necessity compatible with the concept of anything. If the one is possible, the other must be so also, for reason recognizes that only as absolutely necessary which is necessary according to its concept. Both these tasks baffle our attempts at *satisfying* our understanding on this point, and likewise our endeavors to comfort it with regard to its impotence.

#### CRITICISM OF THE PHYSICO-THEOLOGICAL PROOF FOR THE EXISTENCE OF GOD

If, then, neither the concept of things in general, nor the experience of any *existence in general*, can satisfy our demands, there still remains one way open, namely, to try whether any *definite experience*, and consequently that of things in the world as it is, their constitution and disposition, may not supply a proof which could give us the certain conviction of the existence of a supreme being. Such a proof we should call *physico-theological*. If that, however, should prove impossible too, then it is clear that no satisfactory proof whatever, from merely speculative reason, is possible, in support of the existence of a being, corresponding to our transcendental idea.

This proof will always deserve to be treated with respect. It is the oldest, the clearest, and most in conformity with human reason. Its principal points are the

following. First, there are everywhere in the world clear indications of an intentional arrangement carried out with great wisdom, and forming a whole indescribably varied in its contents and infinite in extent. Secondly, the fitness of this arrangement is entirely foreign to the things existing in the world, and belongs to them contingently only; that is, the nature of different things could never spontaneously, by the combination of so many means, co-operate towards definite aims, if these means had not been selected and arranged on purpose by a rational disposing principle, according to certain fundamental ideas. Thirdly, there exists, therefore, a sublime and wise cause (or many), which must be the cause of the world, not only as a blind and all-powerful nature, by means of unconscious *fecundity*, but as an intelligence, by *freedom*. Fourthly, the unity of that cause may be inferred with certainty from the unity of the reciprocal relation of the parts of the world, as portions of a skillful edifice, so far as our experience reaches, and beyond it, with plausibility, according to the principles of analogy.

According to this argument, the fitness and harmony existing in so many works of nature might prove the contingency of the form, but not of the matter, that is, the substance of the world, because, for the latter purpose, it would be necessary to prove in addition, that the things of the world were in themselves incapable of such order and harmony, according to general laws, unless there existed, even in their *substance*, the product of a supreme wisdom. For this purpose, very different arguments would be required from those derived from the analogy

of human art. The utmost, therefore, that could be established by such a proof would be an *architect of the world*, always very much hampered by the quality of the material with which he has to work, not a *creator*, to whose idea everything is subject. This would by no means suffice for the purposed aim of proving an all-sufficient original being. If we wish to prove the contingency of matter itself, we must have recourse to a transcendental argument, and this is the very thing which was to be avoided.

The step leading to absolute totality is entirely impossible on the empirical road. Nevertheless, that step is taken in the physico-theological proof. How then has this broad abyss been bridged over?

The fact is that, after having reached the stage of admiration of the greatness, the wisdom, the power, etc., of the Author of the world, and seeing no further advance possible, one suddenly leaves the argument carried on by empirical proofs, and lays hold of that contingency which, from the very first, was inferred from the order and design of the world. The next step from that contingency leads, by means of transcendental concepts only, to the existence of something absolutely necessary, and another step from the absolute necessity of the first cause to its completely determined or determining concept, namely, that of an all-embracing reality. Thus we see that the physico-theological proof, baffled in its own undertaking, takes suddenly refuge in the cosmological proof, and as this is only the ontological proof in disguise, it really carries out its original intention by means of pure reason only; though it so strongly disclaimed in the

beginning all connection with it, and professed to base everything on clear proofs from experience.

Those who adopt the physico-theological argument have no reason to be so very coy towards the transcendental mode of argument, and with the conceit of enlightened observers of nature to look down upon it as the cob-webs of dark speculators. If they would only examine themselves, they would find that, after they had advanced a good way on the soil of nature and experience, and found themselves nevertheless as far removed as ever from the object revealed to their reason, they suddenly leave that soil, to enter into the realm of pure possibilities, where on the wings of ideas they hope to reach that which had withdrawn itself from all their empirical investigations. Imagining themselves to be on firm ground after that desperate leap, they now proceed to expand the definite concept which they have acquired, they do not know how, over the whole field of creation; and they explain the ideal, which was merely a product of pure reason, by experience, though in a very poor way, and totally beneath the dignity of the object, refusing all the while to admit that they have arrived at that knowledge or supposition by a very different road from that of experience.

Thus we have seen that the physico-theological proof rests on the cosmological, and the cosmological on the ontological proof of the existence of one original being as the supreme being; and, as besides these three, there is no other path open to speculative reason, the ontological proof, based exclusively on pure concepts of reason, is the only possible one, always supposing that any proof

of a proposition, so far transcending the empirical use of the understanding, is possible at all.

#### THE REGULATIVE USE OF THE IDEAS

The dialectic, Kant thinks, confirms the view that all attempts to pass beyond the limits of possible experience are vain and lead to nothing but error. Furthermore, it has shown that reason has a natural inclination to overstep these limits, and that transcendental ideas are as natural to it as categories to the understanding.

Despite their tendency to lead us into illusion, the ideas of reason have a use which depends upon the relation between reason and understanding. Reason seems to be related to understanding in much the same way as understanding is related to sensibility. It is the proper business of reason to render the unity of all possible empirical acts of the understanding systematical, in the same manner as the understanding connects the manifold of phenomena by concepts, and brings it under empirical laws. Thus the ideas of reason furnish a rule or principle for the systematical unity of the whole use of the understanding. But this rule or principle does not of itself determine anything, it merely indicates the procedure by which the empirical and definite use of the understanding may remain in harmony with itself.

Kant holds that the ideas of reason ought never to be employed as constitutive principles. Reason never refers immediately to an object, but to the understanding only, and through it to its own empirical use. Therefore, it does not *form*, concepts of objects, but *arranges* them only, and imparts to them that unity which they can have

in their greatest possible extension, that is, with reference to the totality of different series; while the understanding does not concern itself with this totality, but only with that connection through which such series of conditions become possible according to concepts. Reason has therefore for its object the understanding only and the *fittest* employment of that understanding; and as the understanding brings unity into the manifold of the objects by means of concepts, reason brings unity into the manifold of concepts by means of ideas, making a certain collective unity the aim of the operations of the understanding, which otherwise is occupied with distributive unity only.

From what has been said it will appear that the ideas though not constitutive have a most admirable and indispensably necessary regulative use in directing the understanding to a certain aim. If we review the entire extent of our knowledge supplied by the understanding, we shall find that it is the *systematizing* of that knowledge, that is, its coherence according to one principle, which forms the proper province of reason. This unity of reason always presupposes an idea, namely, that of the form of a whole of our knowledge, preceding the definite knowledge of its parts, and containing the conditions according to which we are to determine *a priori* the place of every part and its relation to the rest. Such an idea, accordingly, demands the complete unity of the knowledge of our understanding, by which that knowledge becomes not a mere aggregate but a system, connected according to necessary laws. Such concepts of reason are not derived from nature, but we only interrogate nature, according to

these ideas, and consider our knowledge defective so long as it is not adequate to them. This use is only hypothetical or regulative because the general idea is merely assumed and never really given or reached. The matter will become clearer if we consider the different ways in which this idea appears.

1. In all our investigations we seek for unity back of the differences. In all fields, reason compels us to seek for some concept capable of explaining the difference between things and the multiplicity of their changes. The logical principle of genera presupposes a transcendental principle in order that the former may be applied to nature. According to it, in the manifoldness of a possible experience, some homogeneousness is necessarily *supposed*, because without it, no empirical concepts, and consequently no experience, would be possible.

2. The logical principle of generalization is balanced by another principle, namely, that of species, which requires manifoldness and diversity in things, in spite of the fact that they belong to the same genus. This principle depending on the faculty of distinction, checks the generalizing flights of fancy which have a tendency to overlook the differences between things. The transcendental principle of specification is not constitutive but is merely regulative. It does not involve an actual infinity of difference in the objects of our knowledge; it simply prescribes a task to the understanding. As the principle of homogeneity prompts us to look for uniformity, so the principle of specification prompts us to note differences.

3. The principle of continuity counsels us to avoid

all violent leaps either in generalization or in specification. This again is only a regulative principle.

The first law keeps us from admitting an extravagant variety of different original genera, and recommends attention to homogeneousness. The second, on the contrary, checks that tendency to unity, and prescribes distinction of sub-species before applying any general concept to individuals. The third unites both, by prescribing, even with the utmost variety, homogeneousness, through the gradual transition from one species to another: thus indicating a kind of relationship of the different branches, as all having sprung from the same stem.

These principles can not be realized in experience but they are necessary, organizing factors, since without an effort to realize them no experience could exist. Hence they must be considered as regulative only, and if they are referred to objects, we must remember that such objects are ideal not real.

Reason, by means of its ideas, has been supposed to be able to deal with the soul, the world, and God, as objects. The futility of any such procedure has already been shown. We can not determine any real object by means of the transcendental ideas. But this does not prove that these ideas and their ideal objects are without value. True, we can not determine the soul as a unity, but still it is necessary to connect all the phenomena, all the actions and feelings, presented to us in inner experience, *as if* the soul were a simple substance. In doing this, the object is merely to find principles of systematical unity for the explanation of the phenomena of the soul. Noth-

ing but good can spring from such an idea, used in this way, provided we do not take it for more than an idea. It is impossible for us to determine the world of experience as an infinite totality; but we nevertheless find it necessary, in order to explain the phenomena of experience, to pass from event to event *as if* all belonged to an infinite series. We have no ground for asserting a perfect God, but reason requires us to consider all connection in the world according to the principles of a systematical unity, and, therefore, *as if* the whole of it had sprung from a single all-embracing being, as its highest and all-sufficient cause. But we must remember that in all these cases reason can have no object except its own formal rule in the extension of its empirical use. It can not legitimately aim at extension beyond all limits of empirical application.

The highest formal unity, which is based on concepts of reason alone, is the unity of purpose; and the speculative interest of reason forces us to regard the order in the world as being designed by God. This principle opens new views to reason and invites it to unite all things according to teleological laws. The admission of God as the only cause of the universe, if used merely as a regulative principle can produce nothing but good. If, however, we look upon this idea as constitutive we commit serious errors. Thus we may indolently cease looking for natural causes and refer everything directly to the will of God. Or again, we may determine God anthropomorphically and then suppose His aims as dictatorially and violently imposed on nature. In this way we avoid the labor of looking for explanations by means

of natural causes. To mistake the regulative principle of the unity of nature for a constitutive principle, and thus to use it in this manner, is simply to confound reason.

Kant puts the general discussion concerning God and the world in a concrete form, near the end of the Dialectic, by means of questions and answers.

If it be asked, Whether there is something different from the world, containing the ground of the order of the world and of its connection according to general laws? The answer is: *certainly there is*. For the world is a sum of phenomena, and there must, therefore, be some transcendental ground of it, that is, a ground to be thought by the pure understanding only. If it is asked, Whether that being is a substance of the greatest reality, necessary, etc.? The answer is, *that such a question has no meaning*. For the categories have no meaning unless they are applied to the world of sense. Outside that field they are mere titles of concepts, which we may admit, but by which we can understand nothing. If the question is asked, Whether we may not at least conceive this being, which is different from the world, in *analogy* with the objects of experience? Our answer is, *certainly we may*, but only as an object in the idea and not in the reality, that is, in so far only as it remains a substratum, unknown to us, of the systematic unity, order, and design of the world, which reason is obliged to adopt as a regulative principle in the investigation of nature. It was not intended that by it we should try to form a conception of what that original cause of the unity of the world may be by itself; it was only meant to teach us how to use it,

or rather its idea, with reference to the systematical use of reason, applied to the things of the world.

But, surely, people will proceed to ask, We *may*, according to this, admit a wise and omnipotent Author of the world? *Certainly*, we answer, *not only we may, but we must*. Do not we thus extend our knowledge beyond the field of possible experience? *By no means*. For we have only presupposed a something of which we have no conception whatever as to what it is in itself. We have only, with reference to the systematical and well-designed order of the world, which we must presuppose, if we are to study nature at all, presented to ourselves that unknown being in *analogy* with what is an empirical concept, namely, an intelligence; that is, we have, with reference to the purposes and the perfection which depend upon it, attributed to it those very qualities on which, according to the conditions of our reason, such a systematical unity may depend. That idea, therefore, is entirely founded on the *employment of our reason in the world*, and if we were to attribute to it absolute and objective validity, we should be forgetting that it is only a being in the idea which we think: and as we should then be taking our start from a cause, that can not be determined by mundane considerations, we should no longer be able to employ that principle in accordance with the empirical use of reason.

If, finally, it is asked, May we not use the concept of a supreme being in our investigations of nature? The answer is, we *may* and *should* because that is the purpose of the idea. But in considering natural things as due to the design of a supreme being one should never forget

that the idea is merely regulative. We are using analogies only and must beware of taking them for things in themselves.\*

Thus we find that pure reason, which at first seemed to promise nothing less than extension of our knowledge beyond all limits of experience, contains, if properly understood, nothing but regulative principles, which indeed postulate greater unity than the empirical use of the understanding can ever achieve. But these principles, by the very fact that they place the goal which has to be reached at so great a distance, carry the agreement of the understanding with itself by means of systematical unity to the highest possible degree; while, if they are misunderstood and mistaken for constitutive principles of transcendent knowledge, they produce, by a brilliant but deceptive illusion constant contradictions and disputes.

Thus all human knowledge begins with intuitions, advances to concepts, and ends with ideas. Although with reference to each of these three elements, it possesses *a priori* sources of knowledge, which at first sight seem to despise the limits of all experience, criticism soon

\* From Kant's note in reference to the psychological idea, it is easy to see how he would have treated the concept of self. It would have been pointed out that we are at liberty to use this conception in our interpretation of phenomena—as indeed Kant himself has done—but we must beware of taking our conception of it as anything more than an analogy which is put in place of something unknown. This point has an important bearing on the interpretation of Kant's philosophy and deserves more consideration than is usually given to it. Critique of Pure Reason, translated by Mueller, p. 558.

convinces us, that reason, in its *speculative use*, can never get, with these elements, beyond the field of possible experience, and that it is the true destination of that highest faculty of knowledge to use all methods and principles of reason with one object only, namely, to follow up nature into her deepest recesses, according to every principle of unity, the unity of design being the most important, but never to soar above its limits, outside of which there is for us nothing.

## INDEX

A posteriori, meaning of, 20; judgments, 20

A priori, meaning of, 20 f.; the pure a priori, 20; mathematical judgments, 22

Æsthetic, transcendental, 26; meaning of term, 26; Kant's general observations on, 33 ff.; authors' observations on, 37 ff.

Analogy of experience, importance of, 106; detailed treatment of, 107 ff.; first analogy, 107; second analogy, 110; third analogy, 125

Analysis, presupposes synthesis, 50, 64; brings different representations under one concept, 51

Analytic, transcendental, 46; parts of, 46; meaning of, 46; meaning of analytic of concepts, 47

Anticipations of perception, 104 f.

Antinomy of pure reason, 177 ff.; first antinomy, 178 ff.; second antinomy, 180 ff.; third antinomy, 183 ff.; fourth antinomy, 186 ff.; solution of the mathematical antinomies, 192; solution of the dynamical antinomies, 192 f.; summary of, 189 ff.; nature of, 149

Apodictic, meaning of, 29

Apperception, unity of, 65 ff., 175 f.; pure apperception, 65; all representations must conform to it, 66 ff.

Apprehension, synthesis of, 57 f.

Aristotle, 52

Axioms of intuition, 102 f.

Berkeley, 7 ff.

Caird, E., 90 note

Categories, meaning of, 52 f., 71; as laws of nature, 85 ff.; table of, 52 f.; metaphysical deduction of, 52 ff.; transcendental deduction of, 54 ff.; limits of, 74 ff., 139; objective validity of, 56; as basis of knowledge a priori, 82 ff.; as grounds of experience, 88 ff.; as schematized, 101; categories have no meaning unless applied to the world of sense, 217; observations on the various deductions of, 53 f., 62 f., 89 ff.

Causality, as an ontological principle, 5; as self-evident, 9; Hume's analysis of, 12 ff.; the category of, 52, 85; its schema, 101; in the analogies, 110 ff.; observations on Kant's views of, 120 ff.; of freedom, 183 ff., 193 ff.; causality of God, 216 ff.; its necessity not subjective, 88 f.

Community, category of, 52; its schema, 101; proof of the principle, 125 ff.

Concept, no knowledge possible without it, 61

Conception, its relation to intuition, 43 f.

Conscious self as substantial entity, 30 note, 37 ff., 150 ff., 175 f.; Hume's criticism of, 16

Consciousness, relation to mind, 37 ff.; of self, 36, 78 ff., 150 ff.; its subject-object form, 30 note, 92 ff.

Constitutive principles, causality a constitutive principle, 16; ideas of reason not constitutive, 212 ff.

Copernican revolution in Kant's philosophy, 19 f.

Cosmological proof, criticism of, 205 ff.

Cosmology, rational, meaning of, 177; antinomies of, 177; first antinomy of, 178 ff.; second antinomy of, 180 ff.; third antinomy of, 183 ff.; fourth antinomy of, 186 ff.

Creighton, J. E., 19 note, 176 note.

Descartes, 1

Dialectic, its material use of formal principles, 45; transcendental dialectic is a critique of dialectical semblance, 45

Dialectical proposition, meaning of, 177

Divine, understanding, 72; mind, 197

Empiricism, its conception of the nature of knowledge, 3 ff.; Kant's philosophy as empiricism, 136

Essence, scholastic doctrine of, 2

Existence, category of, 53; its schema, 101

Experience, all knowledge furnished by, 3; all knowledge begins with, 19 f.

Exposition, meaning of, 27; metaphysical exposition of space, 27 ff.; transcendental exposition of space, 29 f.; metaphysical exposition of time, 31 f.; transcendental exposition of time, 32

Freedom, causality of, 183 ff., 193 ff.; not incompatible with natural causality, 194 ff.; its relation to morality, 196

Function, meaning of, 47

God, Locke's proof of God's existence, 6; as cause in Berkeley's system, 8; ontological proof of, 201 ff.; cosmological proof of, 205 ff.; as cause of the universe, 216 ff.; physico-theological proof of, 208 ff.

Hume, David, 9 ff.

Ideal of pure reason, meaning of, 149 f., 196 ff.

Idealism, refutation of, 131 ff.

Ideas, of sensation and reflection, 4; innate, 1; transcendental, 144; three classes of transcendental, 145; objective deduction not possible in case of the transcendental ideas, 146; transcendental

ideas unable to determine any real object, 215

Imagination, meaning of, 77 f.; transcendental synthesis of, 59 f.

Immortality, refutation of Mendelssohn's proof of, 160; can not be proved, 162, 168 f.; practical reason renders belief in future life possible, 169

Innate ideas, assumed as self-evident by the rationalists, 1; Locke's criticism of, 2 f.

Intuition, Kant's meaning of, 26 note; relation to conception, 43 f.; axioms of, 102 f.

Judgments, of analysis, 21 ff.; of synthesis, 21 ff.; as functions of unity, 47; table of, 48 ff.; a priori, 20; a posteriori, 20; mathematical, 22; function of, 70; schematism of, 100; the synthetical a priori judgments which the principles render possible, 103 ff.

Knowledge, rationalistic conception of, 1 f.; Locke's view of, 3 f.; a priori, 20 f.; a posteriori, 20; how related to thought, 73 ff., 154 f.; arises from two fundamental sources, 43; transcendental, 44 f.; does not extend beyond the objects of possible experience, 87

Leibniz, 1, 17

Locke, 2 ff.

Logic, meaning of, 44; meaning of transcendental logic, 45; universal and particular logic, 44

Material world, assumed by Locke, 5

Mathematics, dominant science in age of Descartes and Leibniz, 1; its judgments synthetical, 22; how possible, 30

Matter, dynamical theory of, 105

Mendelssohn's proof of the permanence of the soul, refutation of, 160 ff.

Metaphysic, its methods have been inadequate, 18

Metaphysical deduction of the categories, 48 ff.; observations on the metaphysical deduction, 53 f.

Metaphysical exposition, meaning of, 27

Metaphysical exposition of space, 27 ff.

Metaphysical exposition of time, 31 f.

Mind, relation to consciousness, 37 ff.; Locke's view of, 3 f.; divine, 197; relation of mind and body, 171 f.

Modality, its categories, 53; expresses degree of knowledge, 128; its judgments, 48

Necessary connection, Hume's view of, 13 f.

Necessity, basis of, 61; its category, 53; its schema, 101; a postulate of empirical thought, 127

Negation, category of, 52

Non-existence, category of, 53

Noumena, 158, 168 note, 173

Objective deduction of the categories, 63 ff.; observations on, 90 ff.

Ontological proof, criticism of, 201 ff.; validity of, 205 note

Paralogisms of rational psychology, 150 ff.; meaning of, 149, 151 f.

Phenomena, meaning of term, 33 ff., 140; relative independence of, 41 f.; selves as, 35 f.; the world a sum of phenomena, 217

Physico-theological proof, criticism of, 208 ff.

Plurality, category of, 52

Possibility, category of, 53; its schema, 101; a postulate of empirical thought, 127

Postulates of empirical thought, 127 ff.; observations on, 129 ff.

Principles of the pure understanding, 101 ff.; observations on, 129 ff., 135 ff.; mathematical and dynamical, 136

Purpose the highest form of unity, 216

Quality, its categories, 52; its schema, 101; of judgments, 48

Quantity, its categories, 52; its schema, 101; of judgments, 48

Rational psychology, paralogisms of, 150 ff.; does not prove the existence of the self as a substance, 154 f.; does not prove the simplicity of the self, 155 f.; does not prove the personal identity of self, 156 f.; the analy-

sis of consciousness of self gives no knowledge of the self as object, 157 f.; it furnishes no knowledge of the self, 166 f.; proves nothing concerning immortality, 166 ff.; observations on, 175 ff.

Rational theology, criticism of, 196 ff.

Rationalism, its ideal of true knowledge, 1; relation to mathematics, 1 f.

Reality, category of, 52; its schema, 101

Reason, two meanings of, 142 f.; logical employment of, 143; paralogisms of, 150 ff.; antinomies of, 177 ff.; ideal of, 196 ff.; its relation to understanding, 212 ff.; its speculative use confined to possible experience, 219 ff.; in its speculative use unable to prove immortality, 168 f.; in its practical employment reason renders belief in a future life possible, 169

Reciprocity, importance of, 125 f.; its category, 52; its schema, 101; proof of the principle, 125 ff.

Recognition, synthesis of, 60 ff.

Refutation of idealism, 131 ff.

Regulative principles, ideas of reason merely regulative, 212 ff.; to mistake them for constitutive principles is to confound reason, 217

Relation, categories of, 52; schema of, 101; judgments of, 48

Representative perception, 5, 8

Reproduction, synthesis of, 58 ff.

Schematism of the categories, 100 f., 135 f.

Self, as substance in Berkeley's philosophy, 9; Hume's treatment of, 16; as an entity which precedes experience, 30 note, 37 ff.; noumenal conditions of self unknown, 62; its numerical identity can not be established, 156 ff.; its immortality can not be proved, 162

Self-consciousness, transcendental unity of, 65 ff.; must be possible to bring all representations under one self-consciousness, 66 ff.; perfectly empty representation, 152, 155; implies connected consciousness of objects, 65 ff.; 89; a logical relation, 175 ff.

Sensibility, meaning of, 43; science of, 44

Seth, Andrew, 17 note, 62 note, 176 note

Smith, Norman Kemp, 17 note, 19 note, 63 note

Soul, the object of rational psychology, 150 f.

Space, the self furnishes the relations of, 6; Hume's treatment of, 11 f.; metaphysical exposition of, 27 ff.; transcendental exposition of, 29 f.

Stephen, Leslie, 17 note

Subjective deduction of the categories, 56 ff.

Substance, Locke's view of, 4; self as substance in Berkeley's philosophy, 9; permanence of, 107 ff.; category of, 52; its schema, 101; proof of the principle, 107 ff.; soul as substance, 151 ff.

Synthesis, meaning of, 50; result of a blind function of the soul, 50; of apprehension, 57 f.; of reproduction, 58 ff.; of recognition, 60 ff.; basis of, 62 f.; not given by senses, 64; presupposed by analysis, 50, 64

Thing-in-itself, meaning of, 34 f.; no knowledge of, 33

Time, the self furnishes the relations of, 6; Hume's treatment of, 11 f.; metaphysical exposition of, 31 f.; transcendental exposition of, 32

Totality, category of, 52

Transcendental deduction, meaning of, 55; of the categories, 54 ff.; its relation to empirical deduction, 55; observations on, 62 f., 89 ff.

Transcendental exposition, meaning of, 29

Transcendental exposition of space, 29 f.

Transcendental exposition of time, 32 f.

Transcendental ideas, meaning of, 144; three classes of, 145; objective deduction not possible, 146; as a guide to the understanding, 144; no knowledge of objects corresponding to these ideas, 148

Transcendental illusion, meaning of, 141, 149, 177

Transcendental knowledge, meaning of, 44 f., 77.; does not extend

beyond the objects of possible experience, 87

Transcendental logic, meaning of, 26, 45; parts of, 45

Transcendental philosophy, meaning of, 24

Transcendental unity of self-consciousness, 65 ff., 174 ff.; an ideal, 175 ff.

Unconditioned, different kinds of, 144 ff.

Understanding, meaning of, 43 ff., 67, 142; relation to synthesis, 64; relation to reason, 212 ff.

Unity, category of, 52; object of all investigation, 214

Vaihinger, H., 94 note

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